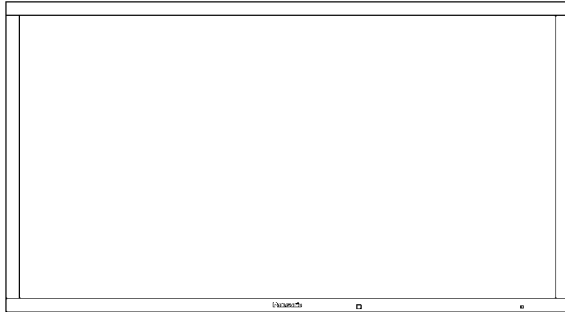


Service Manual

High Definition Plasma Display

Model No. **TH-152UX1**
TH-152UX1W
TH-152UX1C

GPF13UX Chassis



WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety. These parts are marked by  in the Schematic Diagrams, Circuit Board Diagrams, Exploded Views and Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire or other hazards. Do not modify the original design without permission of manufacturer.

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1 Safety Precautions

1.1. General Guidelines

1. When conducting repairs and servicing, do not attempt to modify the equipment, its parts or its materials.
2. When wiring units (with cables, flexible cables or lead wires) are supplied as repair parts and only one wire or some of the wires have been broken or disconnected, do not attempt to repair or re-wire the units. Replace the entire wiring unit instead.
3. When conducting repairs and servicing, do not twist the Faston connectors but plug them straight in or unplug them straight out.
4. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
5. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
6. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

1.1.1. Leakage Current Cold Check

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between 1Mohm and 5.2Mohm.

When the exposed metal does not have a return path to the chassis, the reading must be ∞ .

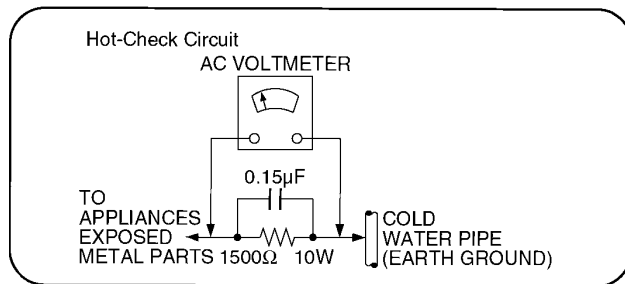


Figure 1

1.1.2. Leakage Current Hot Check (See Figure 1.)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a 1.5kohm, 10 watts resistor, in parallel with a 0.15μF capacitors, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure 1.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 or equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 milliamp. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

1.1.3. High-place work

Please use the safty equipment (protection cap, gloves, safety shoes, and stepladder, etc.) when you work in the height where height is 2m or more.

2 Warning

2.1. Prevention of Electrostatic Discharge (ESD) to Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor [chip] components. The following techniques should be used to help reduce the incidence of component damage caused by electrostatic discharge (ESD).

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device. Some solder removal devices not classified as [anti-static (ESD protected)] can generate electrical charge sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

Caution

Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise ham less motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient to damage an ES device).

2.2. About lead free solder (PbF)

Note: Lead is listed as (Pb) in the periodic table of elements.

In the information below, Pb will refer to Lead solder, and PbF will refer to Lead Free Solder.

The Lead Free Solder used in our manufacturing process and discussed below is (Sn+Ag+Cu).

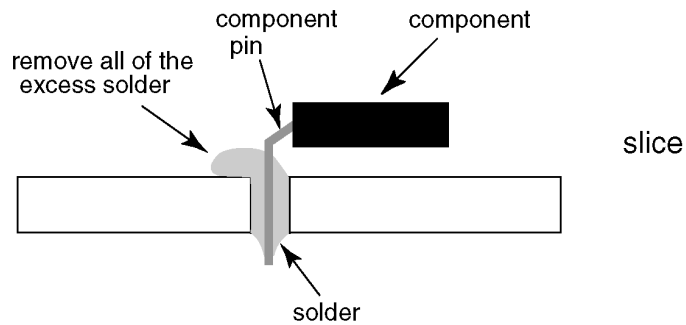
That is Tin (Sn), Silver (Ag) and Copper (Cu) although other types are available.

This model uses Pb Free solder in it's manufacture due to environmental conservation issues. For service and repair work, we'd suggest the use of Pb free solder as well, although Pb solder may be used.

PCBs manufactured using lead free solder will have the PbF within a leaf Symbol **PbF** stamped on the back of PCB.

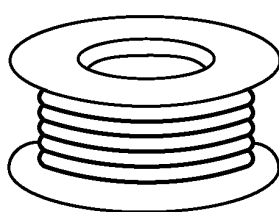
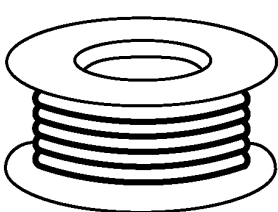
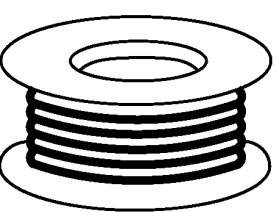
Caution

- Pb free solder has a higher melting point than standard solder. Typically the melting point is 50 ~ 70 °F (30~40 °C) higher. Please use a high temperature soldering iron and set it to 700 ± 20 °F (370 ± 10 °C).
- Pb free solder will tend to splash when heated too high (about 1100 °F or 600 °C).
If you must use Pb solder, please completely remove all of the Pb free solder on the pins or solder area before applying Pb solder. If this is not practical, be sure to heat the Pb free solder until it melts, before applying Pb solder.
- After applying PbF solder to double layered boards, please check the component side for excess solder which may flow onto the opposite side. (see figure below)



Suggested Pb free solder

There are several kinds of Pb free solder available for purchase. This product uses Sn+Ag+Cu (tin, silver, copper) solder. However, Sn+Cu (tin, copper), Sn+Zn+Bi (tin, zinc, bismuth) solder can also be used.

0.3mm X 100g	0.6mm X 100g	1.0mm X 100g
		

3 Service Navigation

3.1. NANODRIFT

Customers could select the NANODRIFT SAVER which reduces image retention OFF in the previous systems, but this system customers can not select OFF.

If customers simply wants to select OFF, customers can set to OFF according to the following steps.

However, the image retention cannot be guaranteed in this case.

Setup steps to select NANODRIFT SAVER to OFF

1. Press SETUP
2. Select Extended life settings
3. Select Custom Settings
4. Set the cursor to NANODRIFT SAVER and press OK more than 5 sec
5. YES/NO Screen of OFF selection is displayed.
6. Select YES, then becomes possible to select OFF.

3.2. VR Adjustment at SCD board

***How to adjust VR by stopping the fan not to operate SOS**

When adjustment VR is under the fan, please stop the fan by following steps and turn adjustment VR.

***If you disconnect the connectors of the Fan, SOS works, and the power supply is turn off so you can not adjust it.**

Steps to stop the Fan

1. Access the CAT mode and select CD mode.(See chap.6.1.)
2. Change the data of MONITOR-EEPROM Change.
Addr :change [00 01] to [00 A7] by Up/Down buttons
Data :change[** **] to [** 00] by [8],[0] buttons

CD BOARD/A/DN		
MONITOR-MCU	1. 0000X20	OK
MONITOR-EEPROM	30. 00 1	0A 4D
MONITOR-EEPROM Change Addr	00	01
	01	01
MONITOR-SUB-MCU	1. 03. 00	
MONITOR-FPGA1/FPGA2	001	003
MONITOR-FRC	02. 03. 12. 17	
MONITOR-MIHO	11. 0c. 00. 64	
SLOT BOARD EEPROM		
BOARD --/--/--		
PTCT	00. 00. 00. 00. 00	

3. Select ID Mode (See chap.6.1.5.) and after ID Mode displayed, turn off the SW of the unit and then turn on again.
4. The unit will start with the Fan stopped, and then adjust VR.

Note:

After VR adjustment is finished, change MONITOR-EEPROM Change to the former value.(See step 2)

Addr :change [00 01] to [00 A7] by Up/Down buttons

Data :change [00 00] to [00 01] by [8],[0] buttons

Select ID Mode (See chap.6.1.5.) and after ID Mode displayed, turn off the SW of the unit and then turn on again.

Check that the unit will start and the Fan works.

3.3. SCU/SCD boards replacement

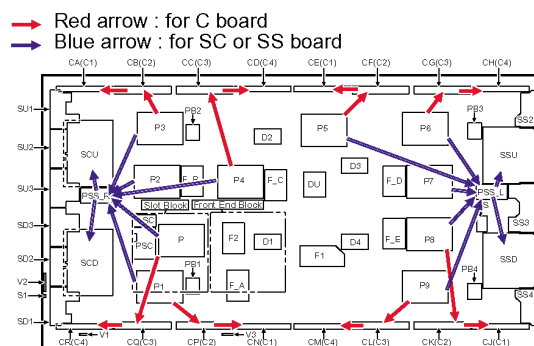
SCU and SCD boards should be replaced at the same time.

3.4. SSU/SSD boards replacement

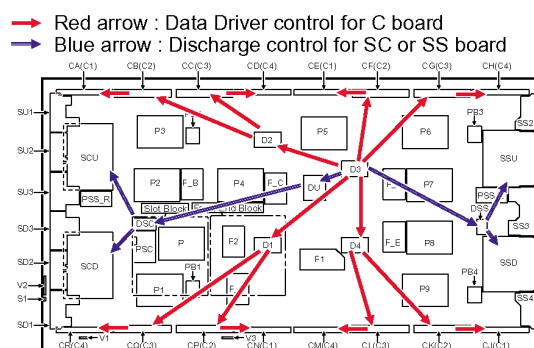
SSU and SSD boards should be replaced at the same time.

3.5. Simple signal flow

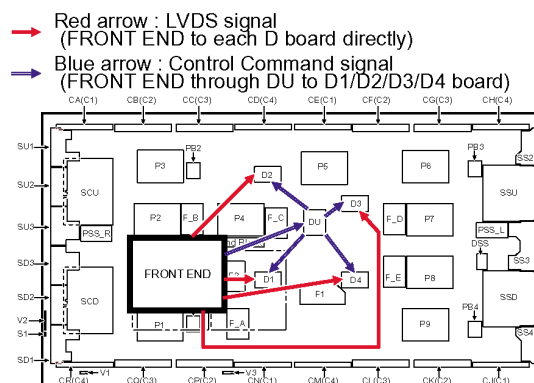
3.5.1. Power Supply flow



3.5.2. Discharge signal flow



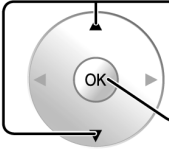
3.5.3. LVDS signal and Control Command signal flow for D board

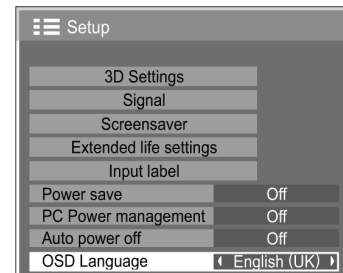


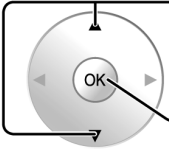
3.6. Option Menu

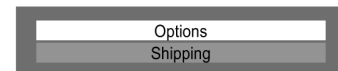
- 1**  Press to display the Setup menu.

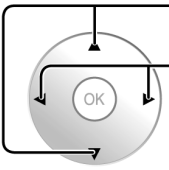


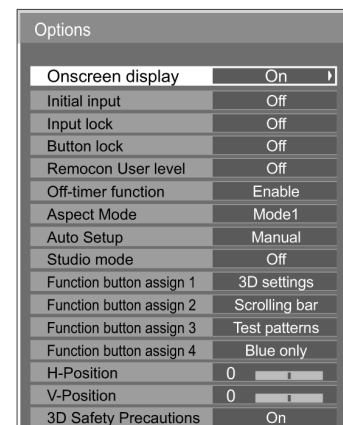
- 2**  Press to select "OSD Language".
Press for more than 3 seconds.



- 3**  Press to select "Options".
Press to display the Options menu.



- 4**  Press to select your preferred menu.
Press to adjust the menu.



- 5**  Press to exit from Options menu.

Option Menu for GPF13UX series

GPF13UX chassis series have special function and operation setting facility called Option Menu. This Option Menu is useful for special function required customers. This should be set at the installation stage.

Option menus	default setting	Contents
Onscreen display	On	Enable/Disable to display input mode indication after power on and no signal indication.
Initial input	Off	Adjusts the input signal when the unit is turned on.
Input lock	Off	Locks the input switch operation.
Button lock	Off	Enable/Disable the operation of the buttons on right side of the main unit.
Remocon User level	Off	Enable/Disable the operation of the buttons on remote control.
Off-timer function	Enable	Enable/Disable Off-timer operation.
Aspect Mode	Mode1	Select the suitable aspect mode.
Auto Setup	Manual	Sets the operational mode of the automatic position adjustment in the POS./SIZE menu.
Studio mode	Off	Switching functions in setting menus used for television studio applications.
Function button assign 1	3D settings	Set the function to operate when the FUNCTION button 1 to 4 on the remote control is pressed.
Function button assign 2	Scrolling bar	
Function button assign 3	Test patterns	
Function button assign 4	Blue only	
H-Position	0	When the input signal is a 4k2k signal, adjust the horizontal position.
V-Position	0	When the input signal is a 4k2k signal, adjust the vertical position.
3D Safety Precautions	On	Set show/hide 3D Safety Precautions during power ON.

Note:

When both main unit buttons and remote control are disabled due to the [Button lock], [Remocon User level] adjustments, set all the values [Off] so that all the buttons are enabled again.

Press the [Down] button on main unit together with [Return] button on the remote control and hold for more than 5 seconds. The [Shipping] menu is displayed and the lock is released when it disappears.

3.7. Applicable signals

*Mark: Applicable input signal

	Signal name	Horizontal frequency (kHz)	Vertical frequency (Hz)	SDI IN 4k2k	DVI-D IN 4k2k	PC IN (Dot clock (MHz))	HDMI 1/2	SLOT DVI-D IN (Dot clock (MHz))
1	525 (480) / 60i	15.73	59.94			* (13.5)	*	
2	525 (480) / 60p	31.47	59.94			*5	*	* (27.0)
3	625 (575) / 50i	15.63	50.00			* (13.5)		
4	625 (576) / 50i	15.63	50.00				*	
5	625 (575) / 50p	31.25	50.00			* (27.0)		
6	625 (576) / 50p	31.25	50.00				*	* (27.0)
7	750 (720) / 60p	45.00	60.00			* (74.25)	*	* (74.25)
8	750 (720) / 50p	37.50	50.00			* (74.25)	*	* (74.25)
9	1,125 (1,080) / 60i	33.75	60.00			* (74.25) *1	*	* (74.25)
10	1,125 (1,080) / 50i	28.13	50.00			* (74.25) *1	*	* (74.25)
11	1,125 (1,080) / 60p	67.50	60.00	* *7	* *7	* (148.5) *1	*	* (148.5)
12	1,125 (1,080) / 50p	56.25	50.00	* *7		* (148.5) *1	*	* (148.5)
13	1,125 (1,080) / 30p	33.75	30.00	* *7		* (74.25) *1		* (74.25)
14	1,125 (1,080) / 25p	28.13	25.00			* (74.25) *1		* (74.25)
15	1,125 (1,080) / 24p	27.00	24.00	* *7		* (74.25) *1	*	* (74.25)
16	1,125 (1,080) / 24sF	27.00	48.00			* (74.25) *2		
17	1,250 (1,080) / 50i	31.25	50.00			* (74.25) *3		
18	2,048 × 1,080 / 24p *6	27.00	24.00	* *7				
19	2,048 × 1,080 / 24sF *6	27.00	48.00					
20	2,048 × 1,080 / 60p	67.50	60.00	* *7	* *7			
21	640 × 400 @ 70Hz	31.46	70.07			* (25.17)		
22	640 × 480 @ 60Hz	31.47	59.94			* (25.18) *5	*	* (25.18)
23	640 × 480 @ 72Hz	37.86	72.81			* (31.5)		
24	640 × 480 @ 75Hz	37.50	75.00			* (31.5)		
25	640 × 480 @ 85Hz	43.27	85.01			* (36.0)		
26	800 × 600 @ 56Hz	35.16	56.25			* (36.0)		
27	800 × 600 @ 60Hz	37.88	60.32			* (40.0)	*	* (40.0)
28	800 × 600 @ 72Hz	48.08	72.19			* (50.0)		
29	800 × 600 @ 75Hz	46.88	75.00			* (49.5)		
30	800 × 600 @ 85Hz	53.67	85.06			* (56.25)		
31	852 × 480 @ 60Hz	31.47	59.94			* (33.54) *5		* (34.24)
32	1,024 × 768 @ 50Hz	39.55	50.00					* (51.89)
33	1,024 × 768 @ 60Hz	48.36	60.00			* (65.0)	*	* (65.0)
34	1,024 × 768 @ 70Hz	56.48	70.07			* (75.0)		
35	1,024 × 768 @ 75Hz	60.02	75.03			* (78.75)		
36	1,024 × 768 @ 85Hz	68.68	85.00			* (94.5)		
37	1,066 × 600 @ 60Hz	37.64	59.94			* (53.0)		* (53.0)
38	1,152 × 864 @ 60Hz	53.70	60.00					* (81.62)
39	1,152 × 864 @ 75Hz	67.50	75.00			* (108.0)		
40	1,280 × 768 @ 60Hz	47.70	60.00			* (80.14)		
41	1,280 × 960 @ 60Hz	60.00	60.00			* (108.0)		
42	1,280 × 960 @ 85Hz	85.94	85.00			* (148.5)		
43	1,280 × 1,024 @ 60Hz	63.98	60.02			* (108.0)	*	* (108.0)
44	1,280 × 1,024 @ 75Hz	79.98	75.03			* (135.0)		
45	1,280 × 1,024 @ 85Hz	91.15	85.02			* (157.5)		
46	1,366 × 768 @ 50Hz	39.55	50.00					* (69.92)
47	1,366 × 768 @ 60Hz	48.36	60.00			* (86.71)		* (87.44)
48	1,400 × 1,050 @ 60Hz	65.22	60.00					* (122.61)
49	1,600 × 1,200 @ 60Hz	75.00	60.00			* (162.0)		* (162.0)
50	1,600 × 1,200 @ 65Hz	81.25	65.00			* (175.5)		
51	1,920 × 1,080 @ 60Hz	67.50	60.00			* (148.5) *4		* (148.5)
52	1,920 × 1,200 @ 60Hz	74.04	59.95					* (154.0)
53	Macintosh13" (640 × 480)	35.00	66.67			* (30.24)		
54	Macintosh16" (832 × 624)	49.72	74.54			* (57.28)		
55	Macintosh21" (1,152 × 870)	68.68	75.06			* (100.0)		

*1: Based on SMPTE 274M standard.

*2: Based on SMPTE RP211 standard.

*3: Based on SMPTE 295M standard.

*4: The input signal is recognized as 1,125 (1,080) / 60p.

*5: When inputted 525p signal to the PC IN terminal, it is recognized as VGA 60Hz signal.

*6: Based on SMPTE 292M and 372M standards. These signals can be received when the Dual Link HD-SDI Terminal Board (TY-FB11DHD) is installed.

*7: For 1 system

Note: Signals without above specification may not be displayed properly.

4 Specifications

Power Source	200-240 V AC, 50/60Hz		
Power Consumption			
Power on	3700W		
Stand-by condition	0.5 W		
Power off condition	0.3 W		
Plasma Display panel	Drive method : AC type		
	152-inch, 17:9 aspect ratio		
Screen size	134.4 inch (3,416 mm) (W) x 70.9 inch (1,801 mm) (H) x 152.0 inch (3,862 mm) (diagonal)		
(No. of pixels)	8,847,360 (4,096 (W) x 2,160 (H)) [4,096 x 2,160 x 3 dots]		
Operating condition			
Temperature	32 °F - 95 °F (0 °C - 35 °C)		
Humidity	20 % - 80 %		
Applicable signals			
Scanning format	525 (480) / 60i • 60p, 625 (575) / 50i • 50p, 750 (720) / 60p • 50p, 1125 (1080) / 60i • 60p • 50i • 50p • 24p • 25p • 30p • 24sF, 1250 (1080) / 50i		
PC signals	VGA, SVGA, XGA, SXGA UXGA (compressed) Horizontal scanning frequency 15 - 110 kHz Vertical scanning frequency 48 - 120 Hz		
Connection terminals			
AV IN	HDMI 1/2	TYPE A Connector x 2 HDMI (Version 1.4 with 3D)	
SDI IN*1		BNC HD-SDI (Dual Link) x 4, 4K signal input	0.8 Vp-p (75-ohm)
DVI-D IN*1		DVI-D (Single Link) 24 Pin x 4, 4K signal input	Compliance with DVI Revision 1.0
PC IN		High-Density Mini D-sub 15 Pin	G with sync 1.0 Vp-p (75-ohm) G without sync 0.7 Vp-p (75-ohm) B: 0.7 Vp-p (75-ohm) R: 0.7 Vp-p (75-ohm) HD/VD: 1.0 - 5.0 Vp-p (high impedance) with picture 1.0 Vp-p (high impedance) without picture 0.3 Vp-p (high impedance)
		VBS (use HD port)	
SERIAL		External Control Terminal D-sub 9 Pin	RS-232C compatible
3D SHUTTER OUT*2		M3 jack x 1, for 3D active shutter eyewear	
SLOT	DVI-D IN	DVI-D 24 Pin Content Protection Audio Input is not available	Compliance with DVI Revision 1.0 Compatible with HDCP 1.1
Accessories Supplied			
Remote Control	N2QAYB000560 (UX1, UX1W) , N2QAYB000561 (UX1C)		
Transmitter			
Batteries	R6(AA)Size x 2		
Fixing band	TMME203 x 3		
Dimensions (W × H × D)	141.8 inch x 78.0 inch x 5.8 inch*3 / 3,600 mm x 1,980 mm x 147 mm*3		
Mass (weight)	approx. 1,272.1 lbs / 577 kg net		

*1 4 inputs is set and only for one 4k2k signal. You can not input 4 different signal to each inputs.

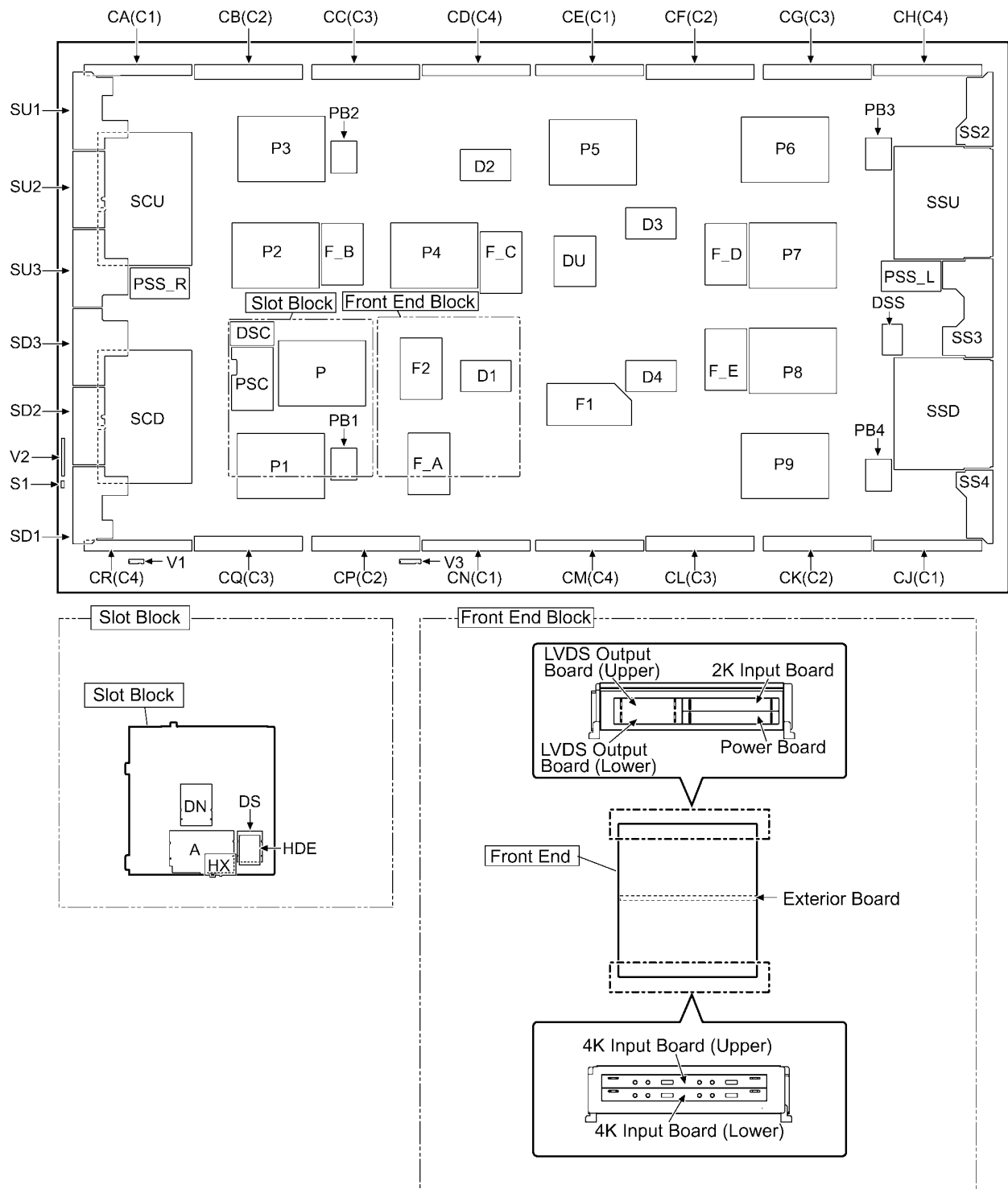
*2 An optional 3D IR TRANSMITTER is required for viewing 3D images.

*3 10.3 inch / 260 mm when including protruding portion of terminals

Note:

- Design and specifications are subject to change without notice. Mass and dimensions shown are approximate.
- This equipment complies with the EMC standards listed below.
EN55022, EN55024, EN61000-3-11, EN61000-3-12.

5 Location



Board Name	Function	Board Name	Function
A	Digital Signal Processor, Microcomputer	C1 (CA(C1), CE(C1), CJ(C1), CN(C1))	Data Drive
DU	Digital Processor		
DN	3D Digital Signal Processor, Microcomputer		
D (D1-D4)	Format Converter, Plasma AI Processor Sub-Field Processor	C2 (CB(C2), CF(C2), CK(C2), CP(C2))	Data Drive
DS	Slot Interface (Audio/ Video/ Sync InputSwitch), DC-DC Converter	C3 (CC(C3), CG(C3), CL(C3), CQ(C3))	Data Drive
SC (SCU, SCD)	Scan Drive	C4 (CD(C4), CH(C4), CM(C4), CR(C4))	Data Drive
SU1 SU2 SU3	Scan Out (Upper)	P(P), P(P1-P9)	Power Supply
		PSC	Power Scan Supply
		PSS (PSS_L, PSS_R)	Power SUS Supply
SD1 SD2 SD3	Scan Out (Lower)	F (FA, FB, FC,FD, FE)	Filter
DSC	Scan Signal Distribution	F1	RELAY Control
SS (SSU, SSD)	Sustain Drive	F2	Filter Coupling
		PB(PB1-PB4)	Fan Control
SS2	Sustain Out (Upper)	HX	PC / RS-232C / LED Transmit
SS3	Sustain Out (Middle)	HDE	DVI-D Interface
SS4	Sustain Out (Lower)	LVDS output (Upper, Lower)	Front End LVDS output
DSS	SUS Signal Distribution	4K input (Upper, Lower)	Front End 4K input
V1	LED_G, R	2K input	Front End 2K input
V2	Key switch	POWER	Front End Power
V3	Remote receiver	EXTERIOR	Front End Exterior
S1	Power Switch		

How to distinguish the connector number when there are two or more boards

	example	meaning
P-Board (P1-P9)	2P9	connector P9 on P2-Board
P-Board (P)	P9	connector P9 on P-Board
D-Board (D1-D4)	2D36	connector D36 on D2-Board
F-Board (FA-FE)	BF91	connector F91 on FB-Board
PB-Board (PB1-PB4)	3PB54	connector PB54 on PB3-Board
C-Board (C1-C4)	C25CB	connector C25 on C2(CB)-Board
PSS-Board (R, L)	PSS6R	connector PSS6 on PSS_R-Board
SC SS-Board (U D)	SC2U	connector SC2 on SCU-Board

6 Service Mode

6.1. CAT (Computer Aided Test) mode

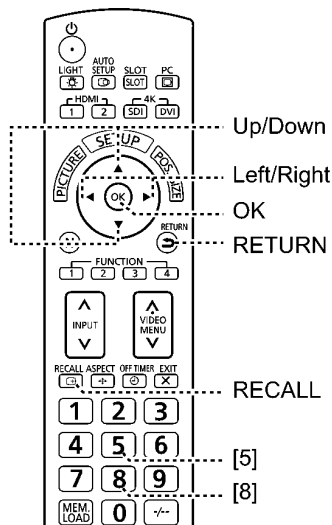
CAT mode menu

CAT panel sys. 8. 2	
IIC Mode	◀
CD Mode	◀
SD Mode	◀
MS Mode	◀
ID Mode	◀

Remote control

Mode	Function	Access button
IIC	Service Alignment	OK
CD (Complete Diagnostics)	Software version information EEPROM edit	[5] more than 3 seconds
SD (Status Display)	MTBF parameter	OK
MS Mode	Market Select	[5] more than 3 seconds
ID Mode	Self Check (Self Check indication only)	[5] more than 3 seconds

Remote control



How to access the CAT mode.

Press and hold the **Down ▼ button** on the front panel of the unit and press the **RECALL button** on the remote control 3 times quickly within 2 second, this will place the unit into the CAT mode.

To exit the **CAT mode**, access the **ID mode** and switch off the main power.

6.1.1. IIC mode

Select the IIC mode by **Up/Down button** on the remote control at the front page of CAT mode and then press the **OK button** on the remote control.

OSD

1024x768/60Hz	
16:9 DYNAMIC Hi	
PANEL W/B Adj.	◀ Subject
R DRIVE	◀ Item
C0 C0	◀ New data
▲	 Original data

How to use the IIC mode.

1. Select the alignment **Subject** by **Up/Down buttons** on the remote control.
2. Select the alignment **Item** by **Left/Right buttons** on the remote control.
3. Adjust **optimum setting** by **[8] , [0] buttons** on the remote control.
4. The **data is memorized** when press the **RETURN button** on the remote control or change the alignment Subject (or Items).

Subject and item are mentioned on [IIC mode structure].

To exit the IIC mode, press the **RETURN button** on the remote control.

6.1.2. CD mode

Select the CD mode by **Up/Down button** on the remote control at the front page of CAT mode and then press the **[5] button** on the remote control more than 3 seconds.

CD BOARD/A/DN	
MONITOR-MCU	1. 0000X20 OK
MONITOR-EEPROM	30. 00 1 0A 4D
MONITOR-EEPROM Change Addr	00 01
Data	01 01
MONITOR-SUB-MCU	1. 03. 00
MONITOR-FPGA1/FPGA2	001 003
MONITOR-FRC	02. 03. 12. 17
MONITOR-MIHO	11. 0c. 00. 64
SLOT BOARD EEPROM	-- -- -- --
BOARD --/--/--	-- -- -- --
PTCT	00. 00. 00. 00. 00

----- Factory use

----- New data

----- Original data

----- SOS history

4k-BOARD	
4k-AB-FPGA1/FPGA2	001 NG
FPGA3/FPGA4	001 004
FPGA5/FPGA6	005 007
4k-CD-FPGA1/FPGA2	001 003
FPGA3/FPGA4	001 004
FPGA5/FPGA6	005 007
2k -FPGA1/FPGA2	001 003
FPGA3/FPGA4	001 004

PANEL	
DU-MCU	1. 08
DU-EEPROM	30. 27
DU-FPGA	11. 02
D-A (D3) -MCU	1. 08
D-A (D3) -EEPROM	30. 27
D-A (D3) -DCC	11. 02
D-A (D3) -PDRM	30. 27
D-B (D2) -MCU	1. 08
D-B (D2) -EEPROM	30. 27
D-B (D2) -DCC	11. 02
D-B (D2) -PDRM	30. 27
D-C (D4) -MCU	1. 08
D-C (D4) -EEPROM	30. 27
D-C (D4) -DCC	11. 02
D-C (D4) -PDRM	30. 27
D-D (D1) -MCU	1. 08
D-D (D1) -EEPROM	30. 27
D-D (D1) -DCC	11. 02
D-D (D1) -PDRM	30. 27

Memory data change

Address ----- Change by **Up /Down buttons** on the remote control.

Change by **Left / Right buttons** on the remote control.

Data ----- Change by **[8] , [0] buttons** on the remote control.

The data is memorized when switch off the main power.

SOS History

SOS History (Number of LED blinking) indication.

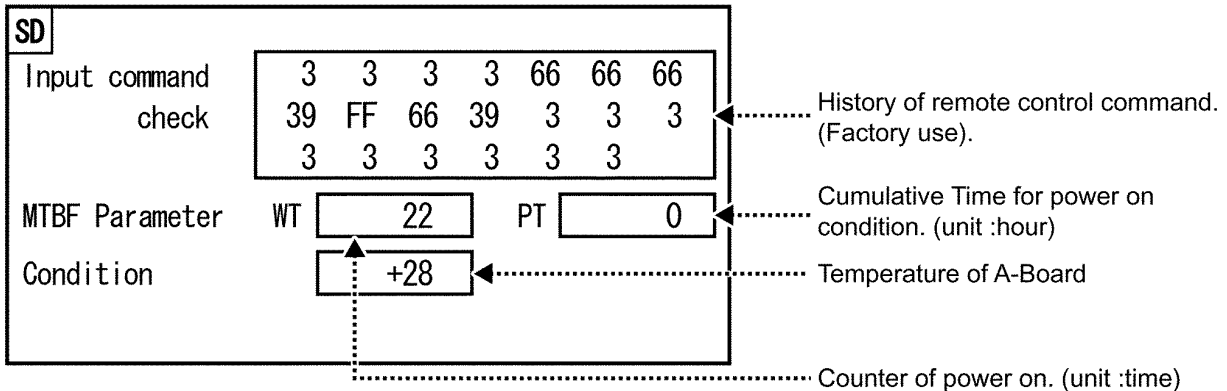
From left side; Last SOS, before Last, three occurrence before, 2nd occurrence after shipment, 1st occurrence after shipment.

This indication will be cleared by [Self-check indication and forced to factory shipment setting].

To exit the CD mode, press the **RETURN button** on the remote control.

6.1.3. SD mode

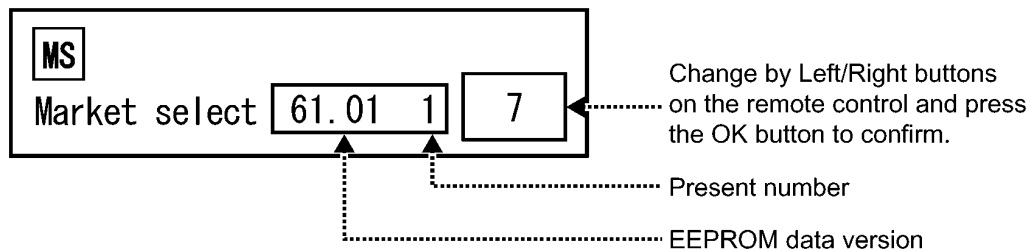
Select the SD mode by **Up/Down button** on the remote control at the front page of CAT mode and then press the **OK button** on the remote control.

OSD

To exit the SD mode, press the **RETURN button** on the remote control.

6.1.4. MS mode

Select the MS mode by **Up/Down button** on the remote control at the front page of CAT mode and then press the **[5] button** on the remote control more than 3 seconds.



To exit the MS mode, press the **RETURN button** on the remote control.

Caution:

Market Select should be set [7] for model TH-152UX1 / UX1W / UX1C after exchange of A-Board.

6.1.5. ID mode

Select the ID mode by **Up/Down button** on the remote control at the front page of CAT mode and then press the **[5] button** on the remote control more than 3 seconds.

ID

IIC1IIC2IIC3IIC4SLAVE

A

IC4004OK H90

IC2108OK H65

IC2509OK H61

IC8201OK H57

IC4001OK H62

IC8001OK H56

IC4501OK H91

DN

IC5001OK H53

IC5201OK H54

IC5501OK H58

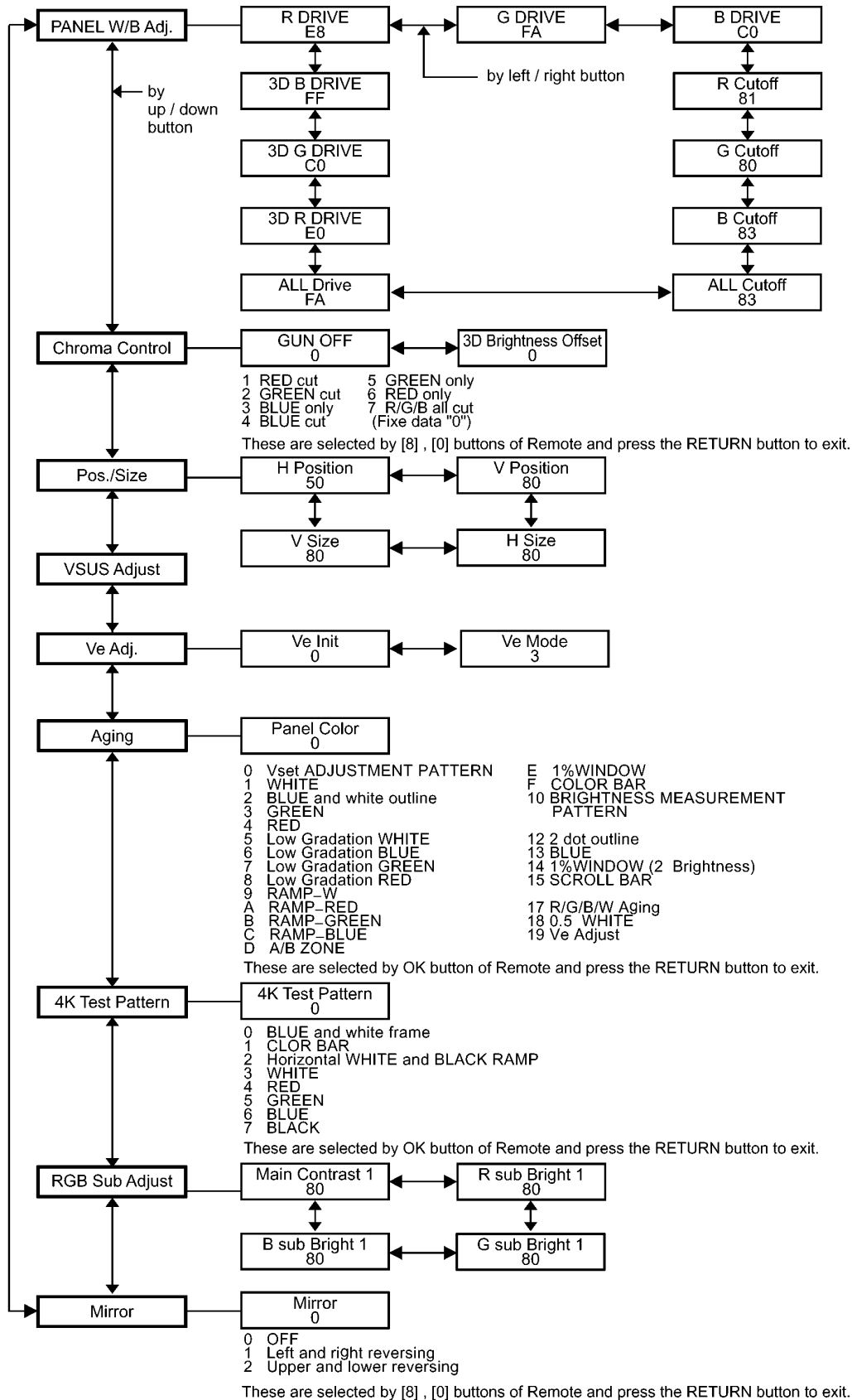
D

PANELOK

To exit the ID mode, press the **RETURN button** on the remote control.

16

6.2. IIC mode structure (following items value is sample data)



7 Troubleshooting Guide

7.1. Self Check

7.1.1. Display Indication

1. Self-check is used to automatically check the bus line controlled circuit of the Plasma display.
2. There are 2 kinds of Self-check mode

Self-check indication and forced to factory shipment setting :

Press the down button on the customer controls at the bottom of the set, at the same time pressing the OFF-TIMER button on the remote control, and the screen will show.

Self-check indication only:

Press [5] button on the remote control at ID mode in CAT mode.(See chapter 6.1.)

If the IIC ports have been checked and found to be incorrect Or not located then [- -] will appear in place of [OK]
[01] in the line of the [PTCT] means the number of blinks of the Power LED is 1. (Reference to 7.1.2)
[H09] in the line of the [PTCT] is the error code.

To exit the CAT mode switch off the main power.

Note:

The line of the [PTCT] displays when you get into the Self-check mode for the first time only after the Power LED blinks.

ID	IIC1	IIC2	IIC3	IIC4	SLAVE
A	IC4004	OK H90	DN	IC5001	OK H53
	IC2108	OK H65		IC5201	OK H54
	IC2509	OK H61		IC5501	OK H58
	IC8201	OK H57			
	IC4001	OK H62	D	PANEL	OK
	IC8001	OK H56			
	IC4501	OK H91			
PTCT	01	H09			

7.1.2. LED Blinking timing chart

1. Subject

Information of LED Blinking timing chart.

2. Contents

When an abnormality has occurred to the unit, the protection circuit operates and resets to the stand by mode.

At this time, the defective block can be identified by the number of blinks of the Power LED on the front panel of the unit .

Power LED on the front panel

Blinking times	Contents	Check point	PTCT indication*
1	No particular check point	D1-D4 Board DU Board A Board	*1 H09
2	P +15V SOS, F +15V SOS, A +15V SOS	P3/P4/P5/P6 Board A Board DS Board D1-D4 Board DU Board	*2 H09
3	P +3.3V SOS	D1-D4 Board DU Board	*3 H09
4	Power SOS	P/P1-P9 Board	04 H09
5	P +5V SOS	P3 Board D1-D4 Board	*5 H09
6	Driver SOS1	SCU Board SCD Board	*6 H09
7	Driver SOS2	SCU/SCD Board SU1-SU3 Board SD1-SD3 Board	*7 H09
8	Driver SOS3	SSU/SSD Board SS2 Board SS3 Board SS4 Board	*8 H09
9	Communication error between Panel-MPU and PD4 MASTER(D3) Discharge control SOS	D1-D4 Board DU Board	*9 H09
10	Terminal Board SOS	Terminal Board DS Board	0A H09
11	FAN SOS	FAN PB1-4 Board A Board	0B H09
12	FPGA config SOS	A Board DN Board	*C H09
13	A +9V, A +3.3V, A +1.8V	A Board	0D H09
	A +5V		1D H09
	A +1.2V_M, A +1.2V_S, SUB +3.3V		2D H09
	A-Board Microcomputer Communication SOS		3D H09
14	LED_10V, 3.3V, 1.2V, 1.05V	DN Board	0E H09
15	Front End 4K FAN SOS	Front End 4K FAN	0F H09
	Front End 4K config SOS	Front End 4K Unit	1F H09

* Refer to 7.1.1 Display Indication for PTCT indication.

7.1.3. Failure without Power LED Blinking

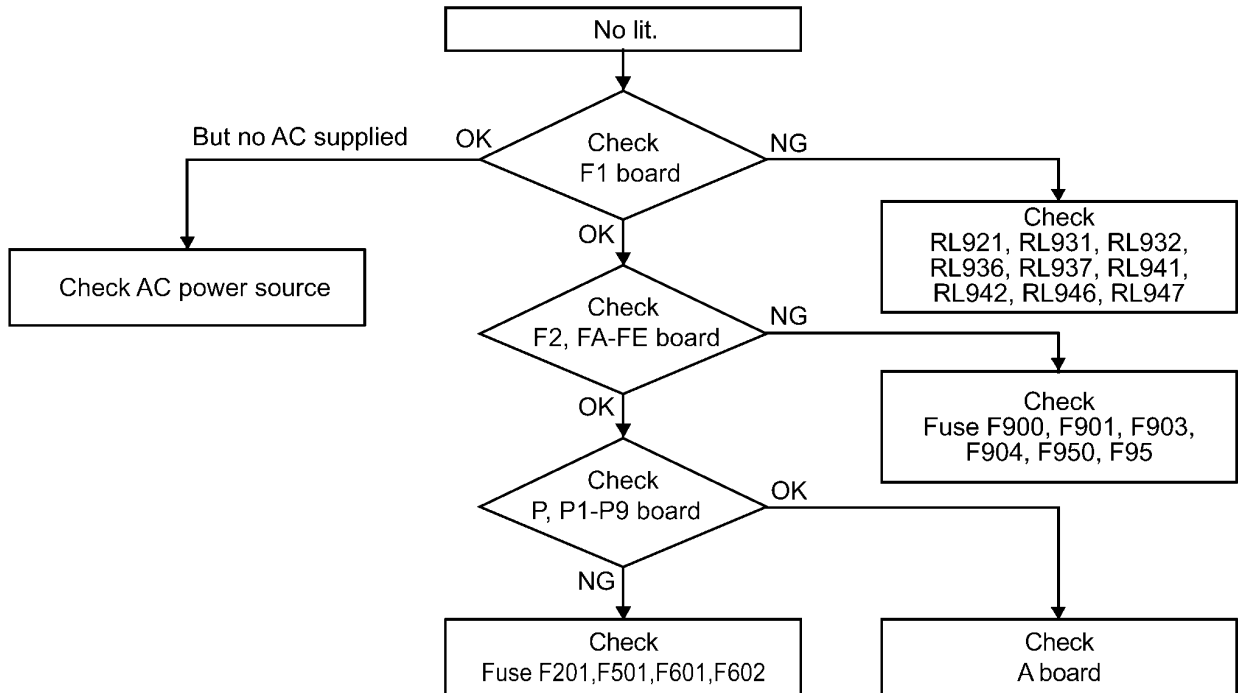
Symptom	Possible cause (1st priority)	Possible cause (2nd)	Possible cause (3rd)	Remarks
Black out, Can not operate, without Green on Power LED No clicking sound of relays.	P/P5 boards	DU board	Connection DU-P, DU-P5	Abnormal Main-STV5V
Black out, Can not operate, with Green on Power LED	DU/D1/D2/D3/D4 boards	Connection D21(D3 board) - DSS1 All connection between DU/D1/D2/D3/D4 boards	DU board	Communication Error between D boards
Black out at 1/4 screen	Connection D3-D1, D3-D2, D3-D4	Related Power board	Related C board	----
Black out at 1/8 screen	Connection between each C board (If the black part is driven by CA,CD,CE,CH,CJ,CM,CN or CR.)	Related C board	Related D1, D2, D3 or D4 board	----
Black out at width driven by each C board	Related C board	Connection for Related C board	Related D board	----
Intermittent clicking of main relay (No LED lights)	DU board	P/P5 boards	----	----
Black out at width driven by Data Driver	Connection between Data Driver and C board	Related C board	Connection between related C and D board.	----
All white scree	Connection of 8 pcs of LVDS cable between FRONT END and D board	----	----	----

7.2. No Power

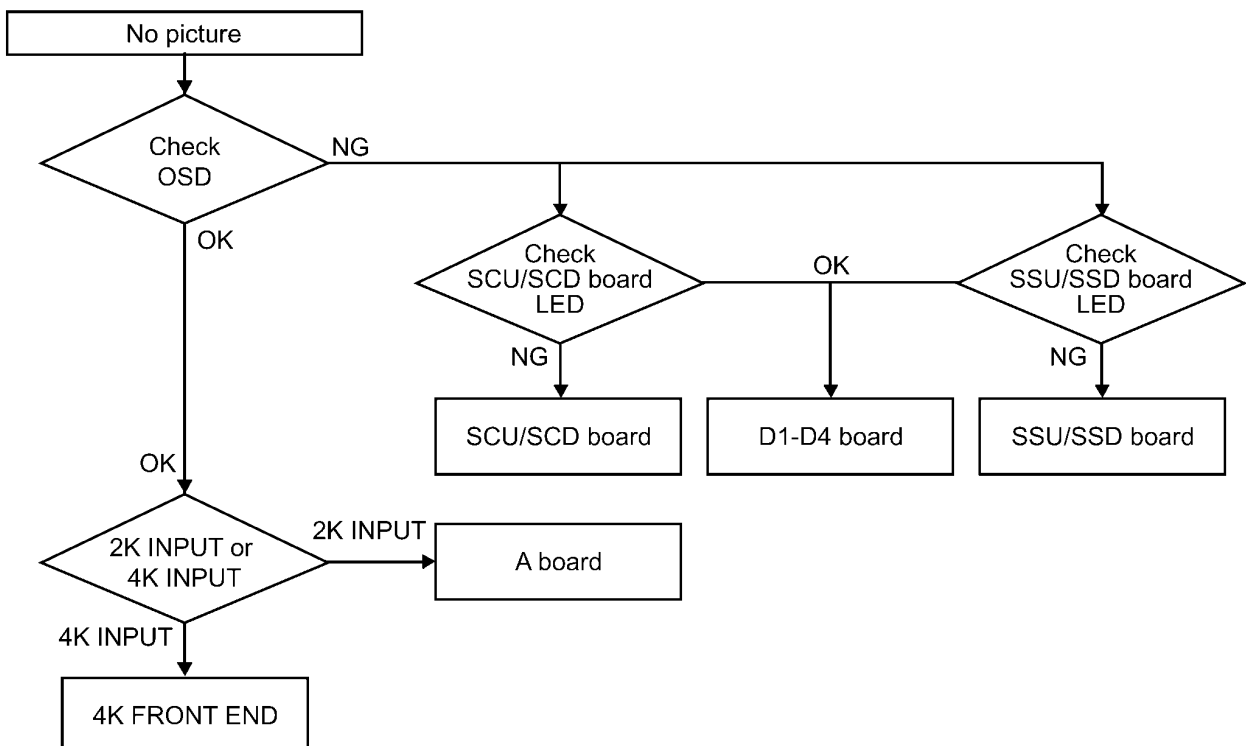
First check point

There are following 3 states of No Power indication by power LED.

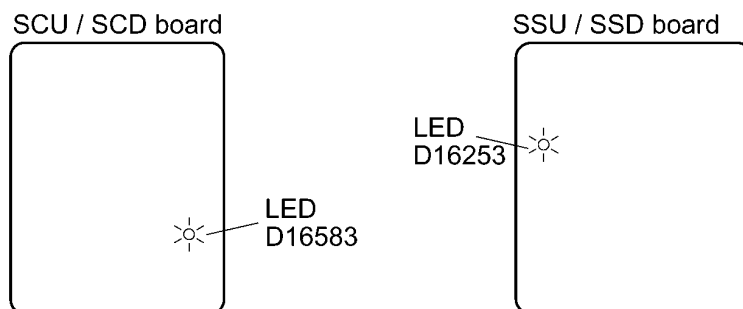
1. No lit.
2. Green is lit then turns red blinking a few seconds later.
3. Only red is lit.



7.3. No Picture



Drive circuits LED indicator



7.4. Diagnostic approach by test pattern

This model has two test patterns, Aging test pattern and 4K test pattern.

Aging test pattern

This is test pattern as previous systems made with a tuner system circuit and a panel system circuit.

[How to display]

1. Access the CAT mode and select IIC mode.(See chap.6.1.)
2. Select Aging by Up/Down button on the remote control and press OK button.
Patterns are selected by OK button of remote control.
Press RETURN button to exit.

4K Test Pattern

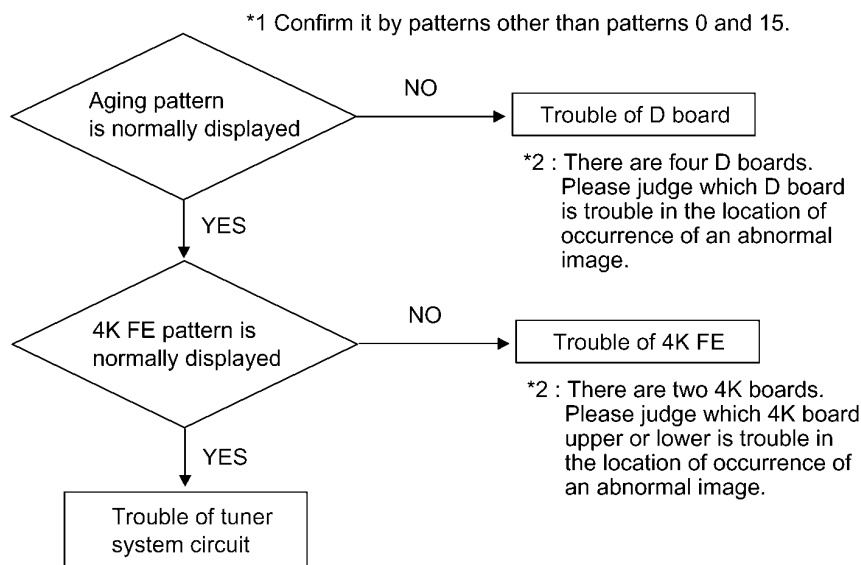
This is a test pattern made from 4K FrontEnd which is newly installed.

[How to display]

1. Access the CAT mode and select IIC mode.(See chap.6.1.)
2. Select 4K Test Pattern by Up/Down button on the remote control and press OK button.
Patterns are selected by OK button of remote control.
Press RETURN button to exit.

The trouble of the image can be diagnosed by displaying these two test patterns. Please refer to the following diagnosis method for the diagnostic approach.

Diagnostic approach



7.5. Local screen failure

Plasma display may have local area failure on the screen. Fig - 1 is the possible defect P.C.B. for each local area.

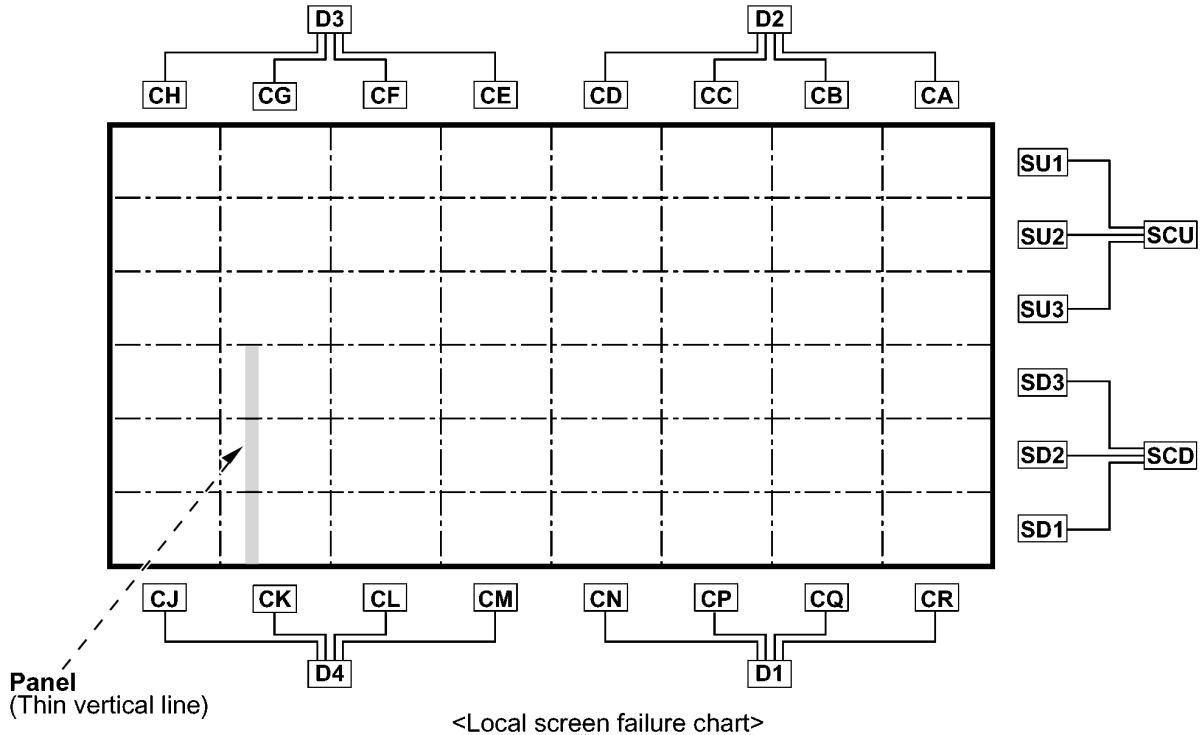


Fig - 1

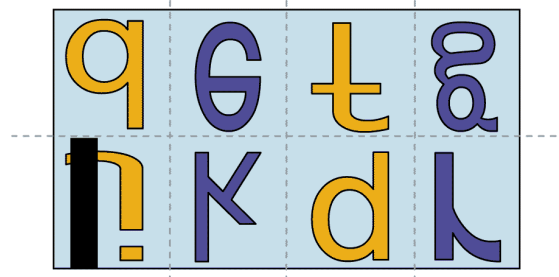
7.5.1. Mirror Function

Hint : IF the defective symptom (e.g. Vertical bar or Horizontal bar) is moved by selection of this mirror, the possible cause is not in Plasma Panel.

Picture can be reversed left and right or up and down as shown in figure by Mirror function in IIC mode (see Chap.6.2).

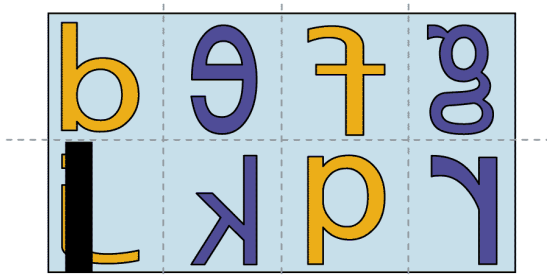
0 : Off

2 : Upper and lower reversing



* It reverses in each of the parts by dividing the screen into eight parts.

1 : Left and right reversing



8 Service Fixture & Tools

8.1. SC jig

Purpose:

To find the failure board (SC or SU/SD) when the power LED is blinking 7 times.

SC jig:

Jumper connector to connect to SC50 connector on SCU and SCD board (to short-circuit pin1 and pin 2 of SC50)

Part number:

TZSC09187

How to use:

Caution: Remove SC jig from SC board after inspection.

1. Remove all connector between SC board and SU/SD board to isolate SC board from both SU and SD board electrically.

Note: The board will be damaged if all connector is not removed (for example; remove connector only for SU board and stay connecting with SD board. The board will be damaged.)

2. Connect SC jig to connector SC50 at left bottom side of SC board.

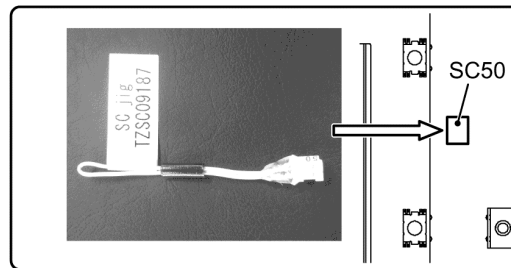
3. Turn on the Unit and confirm the power LED blinking.

LED blinking: Possible cause of failure is in SC board

No LED blinking (Lighting or no lighting): Possible cause of failure is in SU or SD board

4. After inspection, turn off the Unit and wait a few minutes to discharge.

5. Remove SC jig from SC board.



8.2. Electrical discharge jig

Please discharge electricity before removing flexible cables of C-board.

Please connect the electrical discharge jig to discharge land of C-board to discharge before you remove flexible cables of C-board. (Please execute the electrical discharge when you exchange C-board, flexible cables between C-board and C-board, and flexible cables of data driver.)

*** If you removed flexible cables of data driver and flexible cables between C-board and C-board without discharging electricity, data driver IC of the panel might be destroyed.**

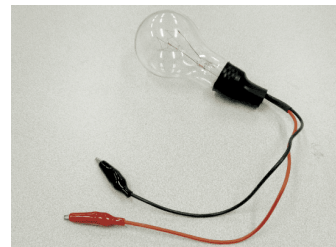
*** It takes about ten minutes when discharge the electricity naturally.**

How to discharge electricity

1. Electrical discharge jig :

Recommended specification

220V, 40W (Equivalent) light bulb etc.



2. Steps

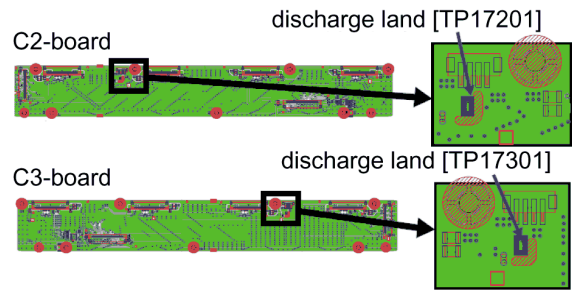
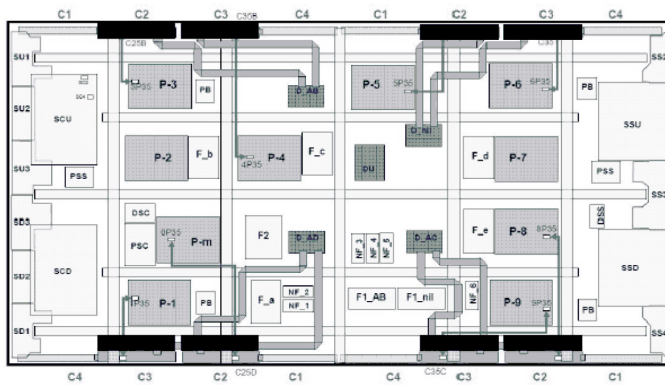
- a. To discharge electricity of C1 or C2-board, connect the electrical discharge jig between discharge land [TP17201] and GRAND of C2-board.

To discharge electricity of C3 or C4-board, connect the electrical discharge jig between discharge land [TP17301] and GRAND of C3-board.

- b. Leave until the light of the light bulb goes out.

- c. Remove flexible cables when you can confirm the light went out.

Place of discharge land [TP17201/TP17301]



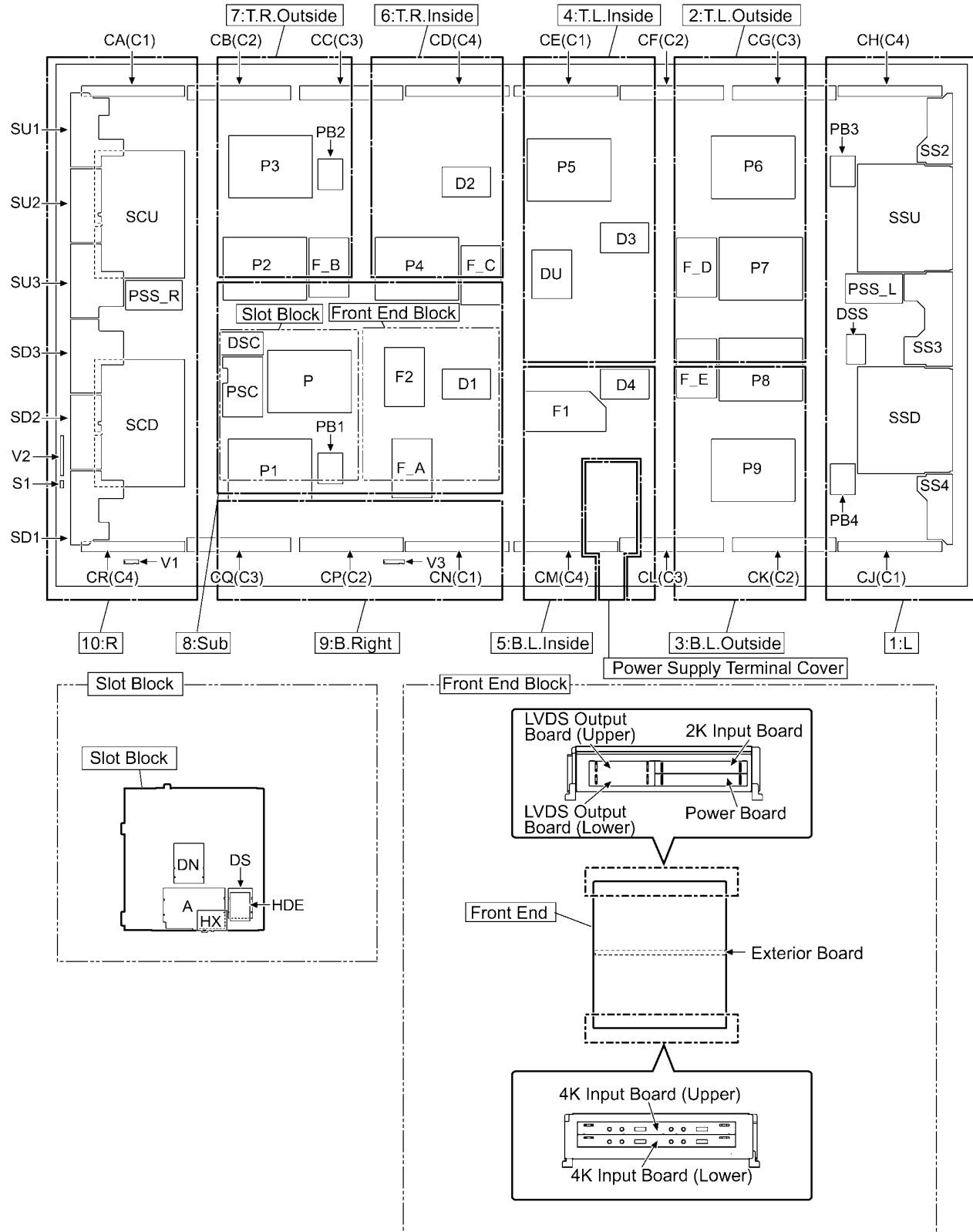
8.3. L type screwdriver jig

Use L type screwdriver jig when you remove the screws of the supports of pedestal, and hidden under the metal fittings etc.



9 Disassembly and Assembly Instructions

- To disassemble P.C.B., use the discharge jig and wait for discharge from electrolysis capacitors after power was off.
- ○, ▲ and ⇧ marks indicate screw positions.



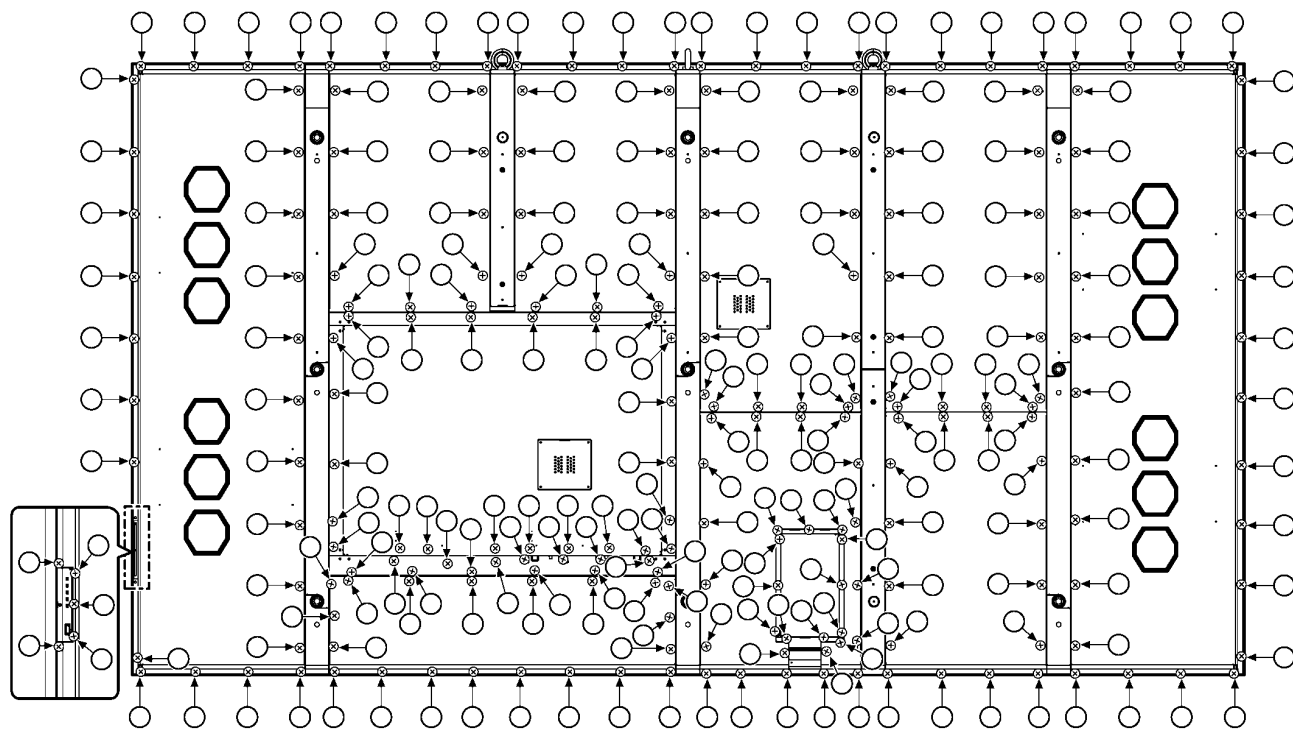
9.1. Rear Cover and Board

Rear Cover required to remove for each board exchange.

Board Name	Rear Cover
CA(C1)-Board	10
CB(C2)-Board	10 , 7
CC(C3)-Board	7 , 6
CD(C4)-Board	6 , 4
CE(C1)-Board	4 , 6
CF(C2)-Board	4 , 2
CG(C3)-Board	2 , 1
CH(C4)-Board	1
CJ(C1)-Board	1
CK(C2)-Board	3 , 1
CL(C3)-Board	5 , 3
CM(C4)-Board	5 , 9
CN(C1)-Board	5 , 9
CP(C2)-Board	9
CQ(C3)-Board	10 , 9
CR(C4)-Board	10
SU1-Board	10
SU2-Board	10
SU3-Board	10
SD1-Board	10
SD2-Board	10
SD3-Board	10
SCU-Board	10
SCD-Board	10
P1-Board	8 , 9
P2-Board	7 , 6 , 8
P3-Board	7
P4-Board	7 , 6 , 8
P5-Board	4
P6-Board	2
P7-Board	2
P8-Board	2 , 3
P9-Board	3
P-Board	8
F_A-Board	8 , 9
F_B-Board	7 , 6 , 8
F_C-Board	7 , 6 , 8
F_D-Board	2
F_E-Board	2 , 3
F1-Board	5
F2-Board	8
D1(D_AD)-Board	8 , 9
D2(D_AB)-Board	6
D3(D_ni11)-Board	4
D4(D_AC)-Board	5
DU-Board	4
SSU-Board	1
SSD-Board	1
SS2-Board	1
SS3-Board	1
SS4-Board	1
PSS_L-Board	1
PSS_R-Board	10
PB1-Board	8
PB2-Board	7
PB3-Board	1
PB4-Board	1
DSC-Board	8
DSS-Board	1
PSC-Board	8
V1-Board	10
V2-Board	10

Board Name	Rear Cover
V3-Board	9
S1-Board	10
HX-Board	8
A-Board	8
DS-Board	8
DN-Board	8
HDE-Board	-
4K Input Board (Upper)	8
4K Input Board (Lower)	8
2K Input Board	8
LVDS Output Board (Upper)	8
LVDS Output Board (Lower)	8
Power Board	8
Exterior Board	8

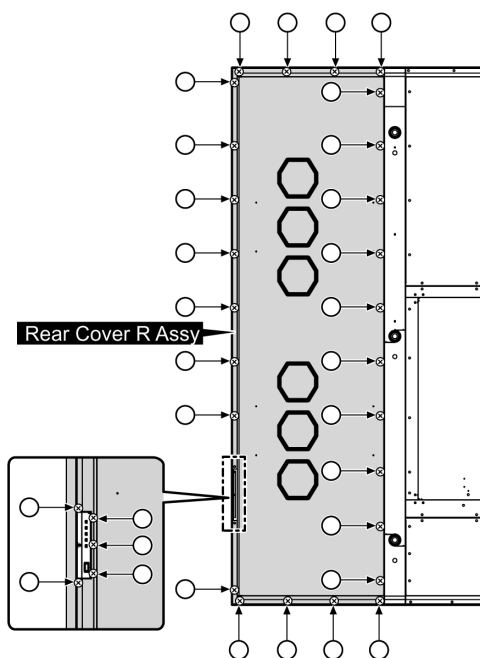
9.2. Location of Rear Cover screws



Remove : 233 screws (○) THEL065Z

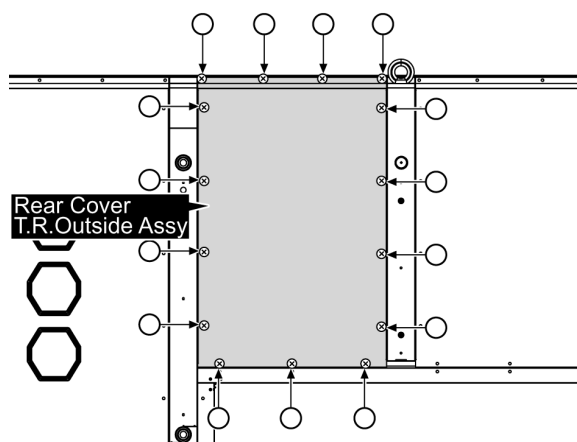
9.2.1. Removal of Rear Cover R Assy

1. Remove screws(×31 ○)and then remove the Rear Cover R Assy.



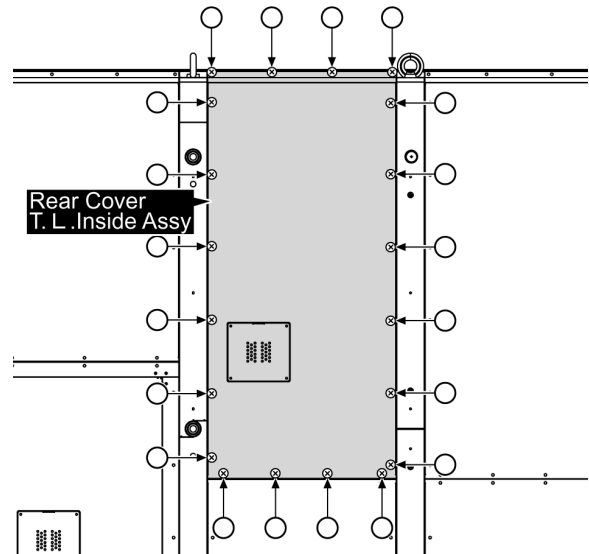
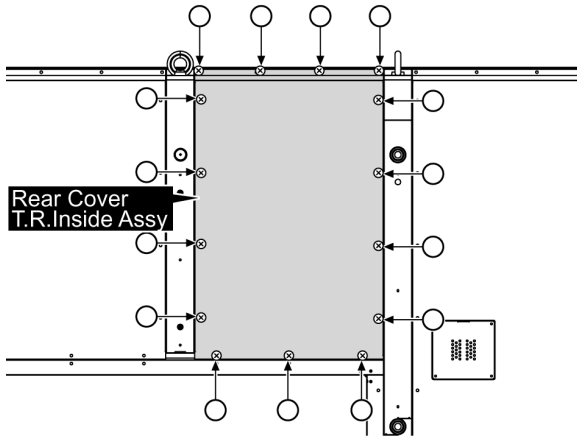
9.2.2. Removal of Rear Cover T.R.Outside

1. Remove screws(×15 ○)and then remove the Rear Cover T.R.Outside Assy.



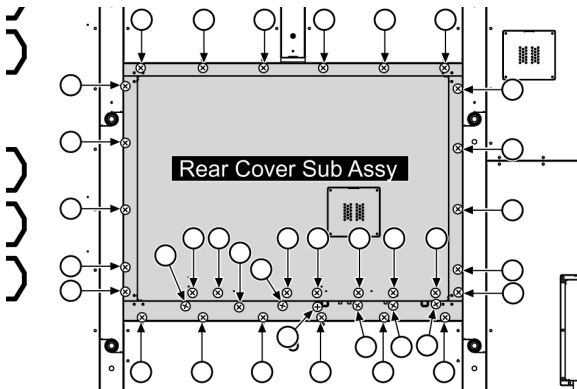
9.2.3. Removal of Rear Cover T.R.Inside Assy

1. Remove screws(×15 ) and then remove the Rear Cover T.R.Inside Assy.



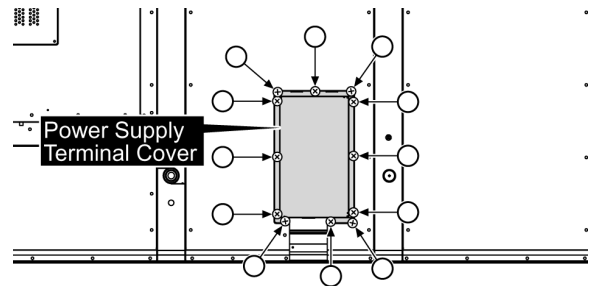
9.2.4. Removal of Rear Cover Sub Assy

1. Remove screws(×36 ) and then remove the Rear Cover Sub Assy.



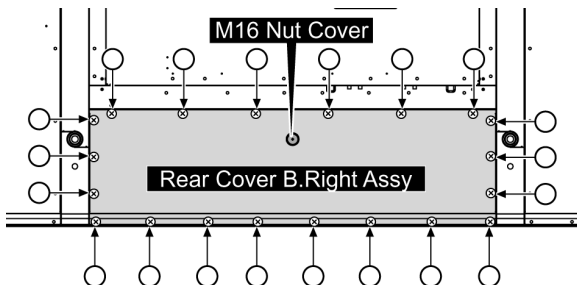
9.2.7. Removal of Rear Cover B.L.Inside Assy

1. Remove screws(×12 ) and then remove the Power Supply Terminal Cover.

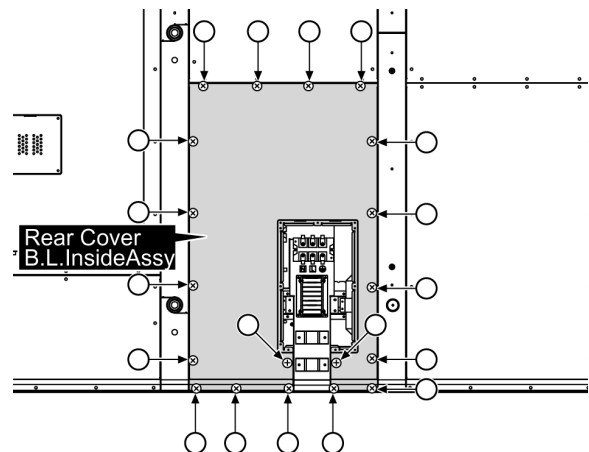


9.2.5. Removal of Rear Cover B.Right Assy

1. Remove the M16 Nut Cover.
2. Remove screws(×20 ) and then remove the Rear Cover B.Right Assy.



2. Remove screws(×19 ) and then remove the Rear Cover B.L.Inside Assy.

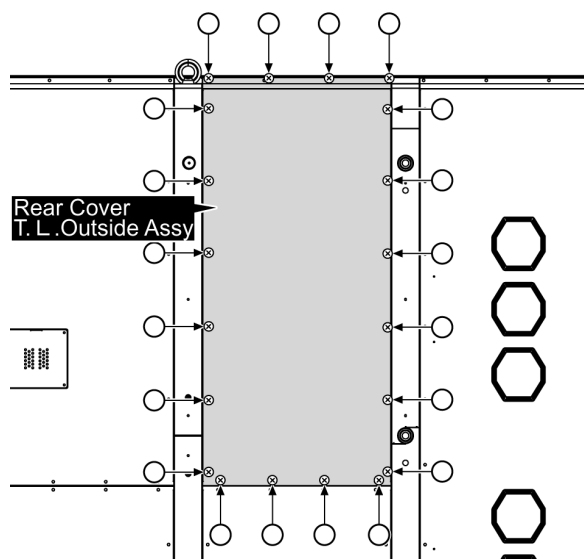


9.2.6. Removal of Rear Cover T.L.Inside Assy

1. Remove screws(×20 ) and then remove the Rear Cover T.R.Inside.

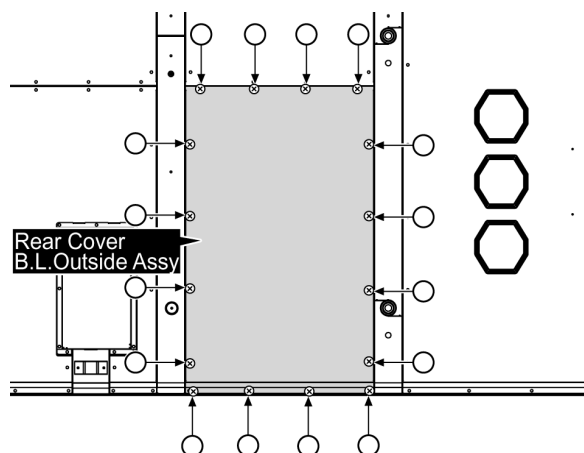
9.2.8. Removal of Rear Cover T.L.Outside Assy

1. Remove screws(×20 ) and then remove the Rear Cover T.L.Outside Assy.



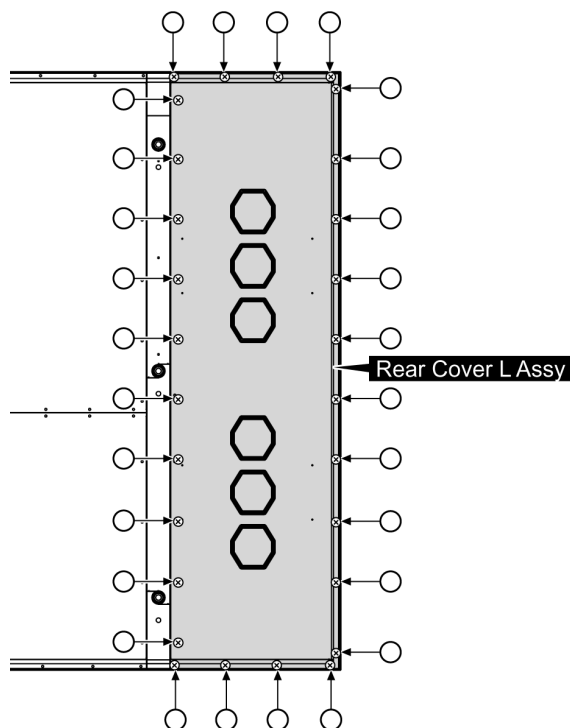
9.2.9. Removal of Rear Cover B.L.Outside Assy

1. Remove screws(×16 ) and then remove the Rear Cover B.L.Outside Assy.



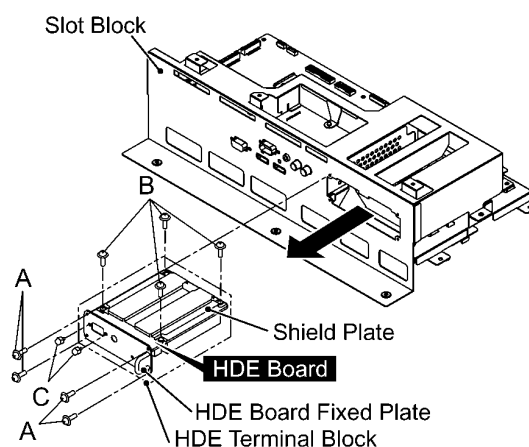
9.2.10. Removal of Rear Cover L Assy

1. Remove screws(×28 ) and then remove the Rear Cover L Assy.



9.3. Removal of HDE-Board

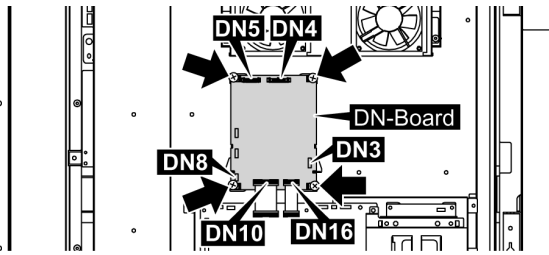
1. Remove 4 screws (A) and then remove the HDE Terminal Block.
2. Remove 4 screws (B).
3. Remove 2 screws (C) and then remove HDE-Board.



9.4. Removal of DN-Board

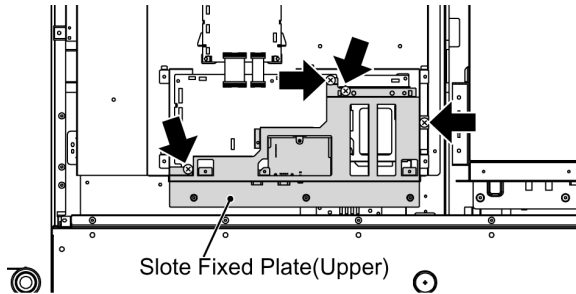
1. Disconnect the connectors (DN3, DN4, DN5, DN8).
2. Remove the flexible cables from the connectors (DN10, DN16).

- Remove 4 screws and then remove DN-Board.

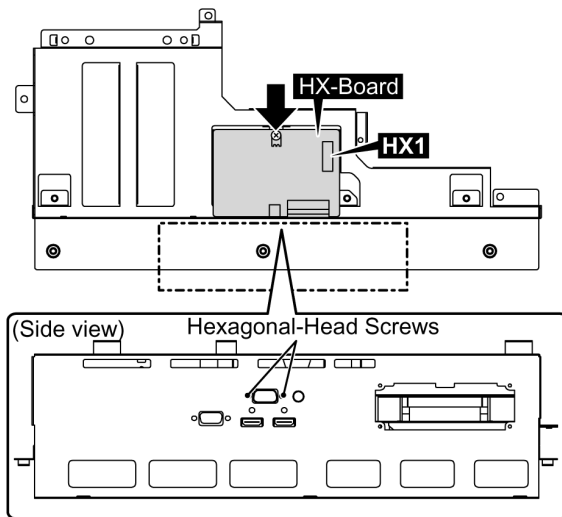


9.5. Removal of HX-Board

- Remove 4 screws and then remove the Slot Fixed plate(Upper).

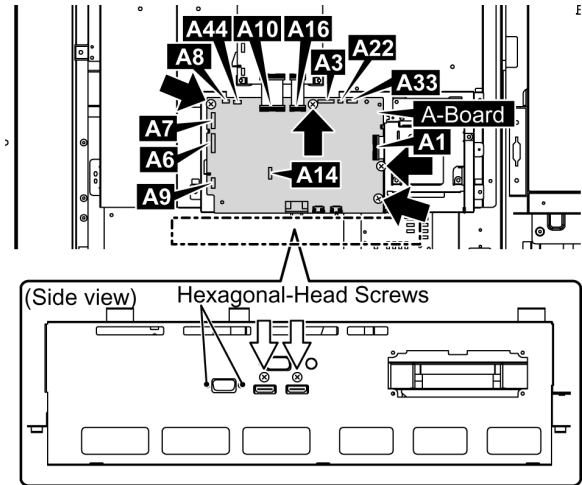


- Disconnect the connector (HX1).
- Remove Hexagonal-Head 2 screws and 1 screw then remove HX-Board.



9.6. Removal of A-Board

- Remove the Slot Fixed Plate (Upper) and HX-Board. (Refer to Removal of HX-Board)
- Disconnect the connectors (A3, A6, A7, A8, A9, A14, A22, A33, A44).
- Remove the flexible cables from the connectors (A1, A10, A16).
- Remove Hexagonal-Head 2 screws.
- Remove 4 screws (⬆).
- Remove 2 screws (↖) and then remove the A-Board.

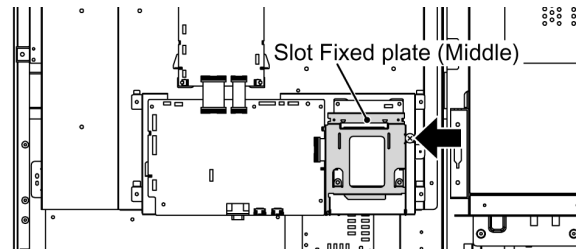


Note:

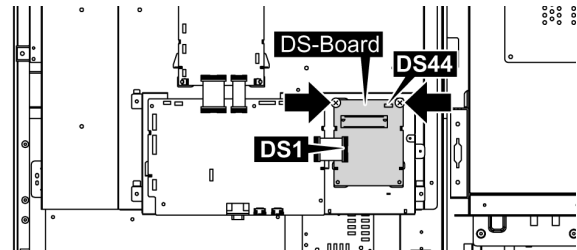
A re-setup of the destination is performed by MS mode after A-Board exchange.

9.7. Removal of DS-Board

- Remove the Slot Fixed Plate (Upper) and HX-Board. (Refer to Removal of HX-Board)
- Remove 1 screw and then remove the Slot Fixed plate (Middle).

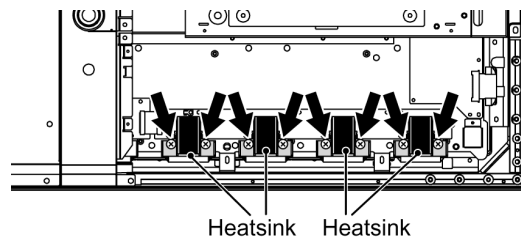


- Disconnect the connector (DS44).
- Remove the flexible cable from the connector (DS1).
- Remove 2 screws and then remove DS-Board.



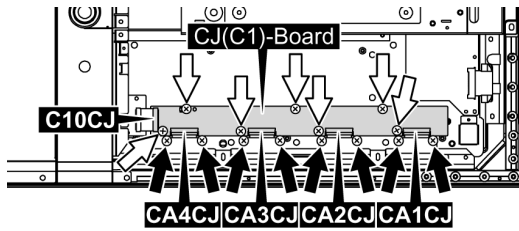
9.8. Removal of CJ(C1)-Board

- Remove each 2 screws and then remove the Heatsink.



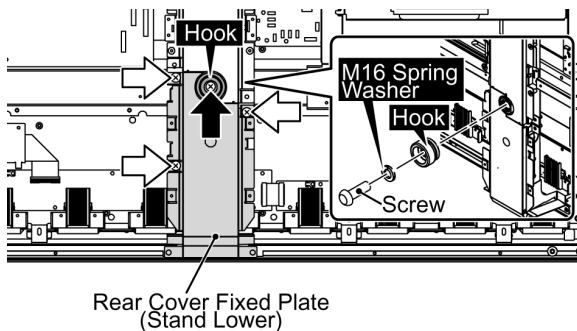
- Remove the flexible cable from the connector (C10CJ)

3. Remove 8 screws (⬆) and then remove the flexible cables from the connectors (CA1CJ, CA2CJ, CA3CJ, CA4CJ).
4. Remove 7 screws (⬆) and then remove CJ(C1)-Board .

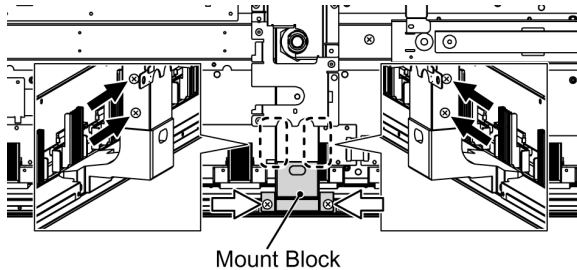


9.9. Removal of CK(C2)-Board

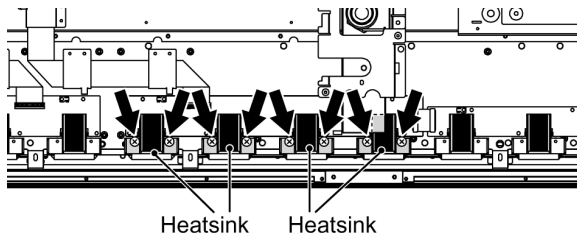
1. Remove 1 screw (⬆) and then remove Hook and M16 Spring Washer.
2. Remove 3 screws (⬆) and then remove Rear Cover Fixed Plate (Stand Lower).



3. Remove 4 screws (⬆).
4. Remove 2 screws (⬆) and then slide the Mount Block downward.

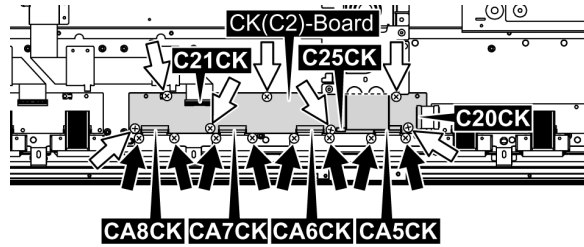


5. Remove each 2 screws and then remove the Heatsink.



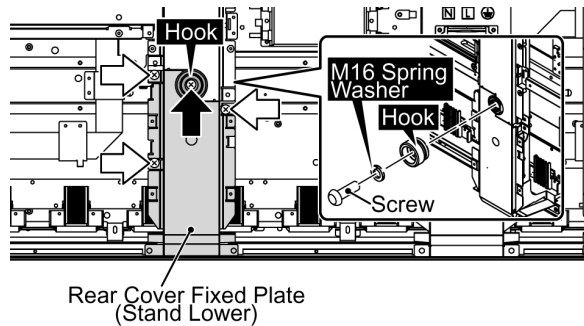
6. Disconnect the connector(C25CK).
7. Remove the flexible cables from the connectors (C20CK, C21CK).
8. Remove 8 screws (⬆) and then remove the flexible cables from the connectors (CA5CK, CA6CK, CA7CK, CA8CK).

9. Remove 7 screws (⬆) and then remove CK(C2)-Board .

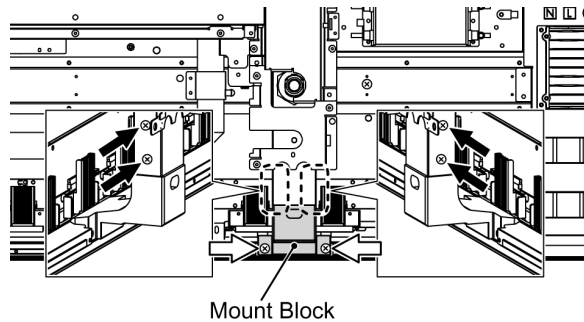


9.10. Removal of CN(C1)-Board

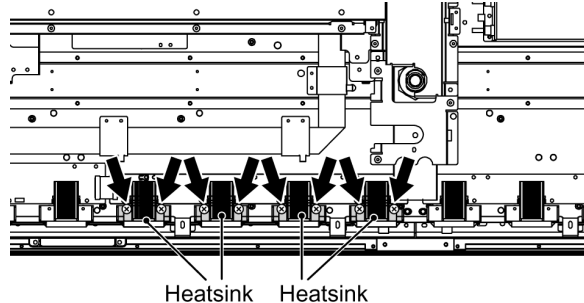
1. Remove 1 screw (⬆) and then remove Hook and M16 Spring Washer.
2. Remove 3 screws (⬆) and then remove Rear Cover Fixed Plate (Stand Lower).



3. Remove 4 screws (⬆).
4. Remove 2 screws (⬆) and then slide the Mount Block downward.

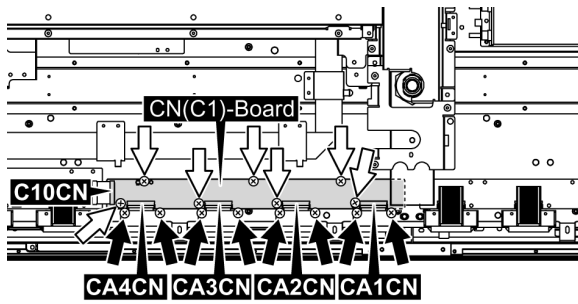


5. Remove each 2 screws and then remove the Heatsink.



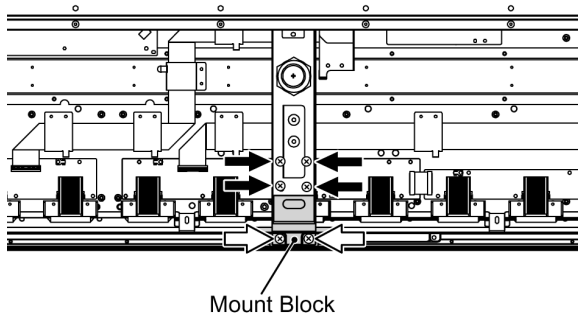
6. Remove the flexible cable from the connector (C10CN).
7. Remove 8 screws (⬆) and then remove the flexible cables from the connectors (CA1CN, CA2CN, CA3CN, CA4CN).

8. Remove 7 screws (⬆) and then remove CN(C1)-Board .

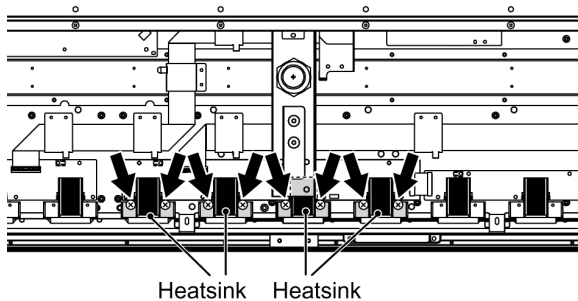


9.11. Removal of CP(C2)-Board

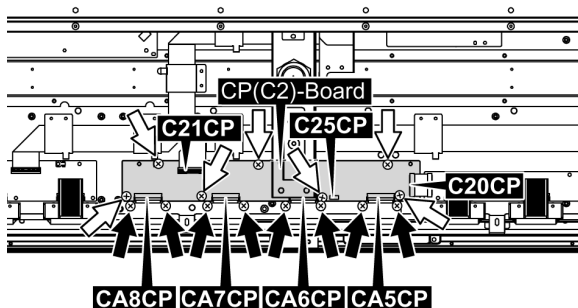
1. Remove 4 screws (⬆).
2. Remove 2 screws (⬆) and then slide the Mount Block downward.



3. Remove each 2 screws and then remove the Heatsink.

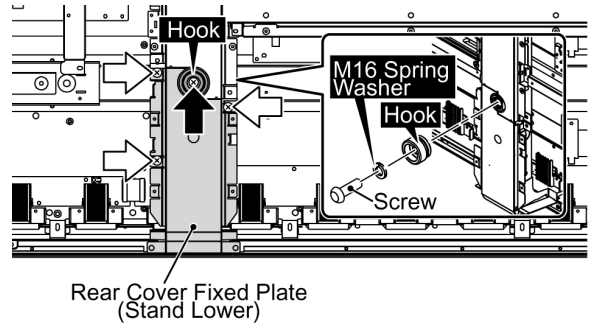


4. Disconnect the connector(C25CP).
5. Remove the flexible cables from the connectors (C20CP, C21CP).
6. Remove 8 screws (⬆) and then remove the flexible cables from the connectors (CA5CP, CA6CP, CA7CP, CA8CP).
7. Remove 7 screws (⬆) and then remove CP(C2)-Board .

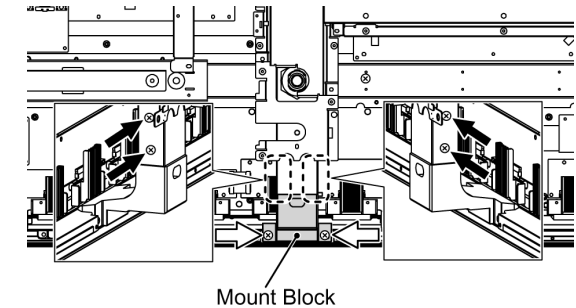


9.12. Removal of CQ(C3)-Board

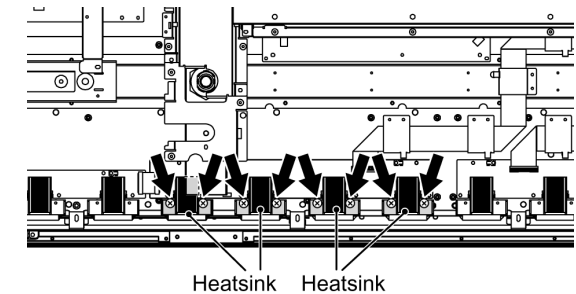
1. Remove 1 screw (⬆) and then remove Hook and M16 Spring Washer.
2. Remove 3 screws (⬆) and then remove Rear Cover Fixed Plate (Stand Lower).



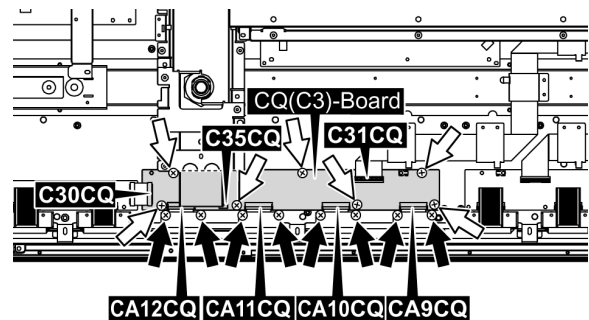
3. Remove 4 screws (⬆).
4. Remove 2 screws (⬆) and then slide the Mount Block downward.



5. Remove each 2 screws and then remove the Heatsink.

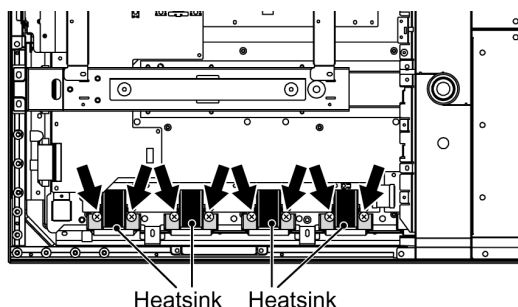


6. Disconnect the connector(C35CQ).
7. Remove the flexible cables from the connectors (C30CQ, C31CQ).
8. Remove 8 screws (⬆) and then remove the flexible cables from the connectors (CA9CQ, CA10CQ, CA11CQ, CA12CQ).
9. Remove 7 screws (⬆) and then remove CQ(C3)-Board .

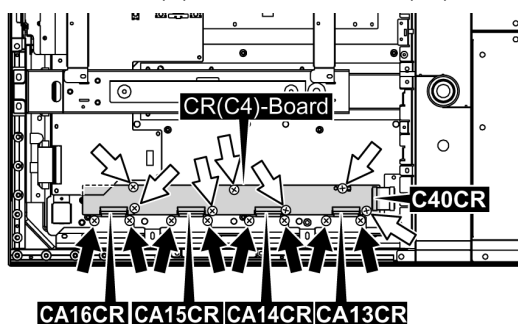


9.13. Removal of CR(C4)-Board

1. Remove each 2 screws and then remove the Heatsink.

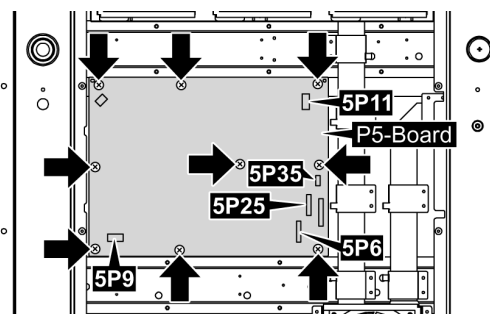


2. Remove the flexible cable from the connector (C40CR).
3. Remove 8 screws (↑) and then remove the flexible cables from the connectors (CA13CR, CA14CR, CA15CR, CA16CR).
4. Remove 7 screws (⇧) and then remove CR(C4)-Board.



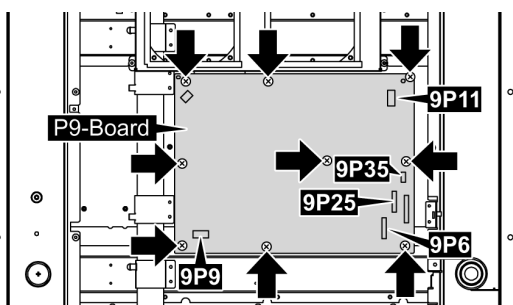
9.14. Removal of P5-Board

1. Disconnect the connectors (5P6, 5P9, 5P11, 5P25, 5P35).
2. Remove 9 screws and then remove P5-Board.



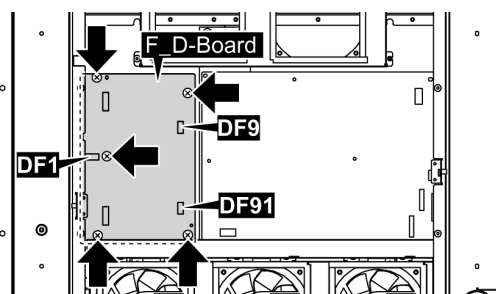
9.15. Removal of P9-Board

1. Disconnect the connectors (9P6, 9P9, 9P11, 9P25, 9P35).
2. Remove 9 screws and then remove P9-Board.



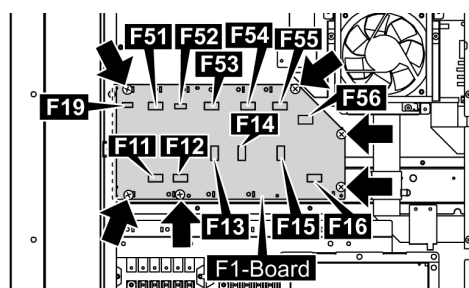
9.16. Removal of F_D-Board

1. Disconnect the connectors (DF1, DF9, DF91).
2. Remove 5 screws and then remove F_D-Board.



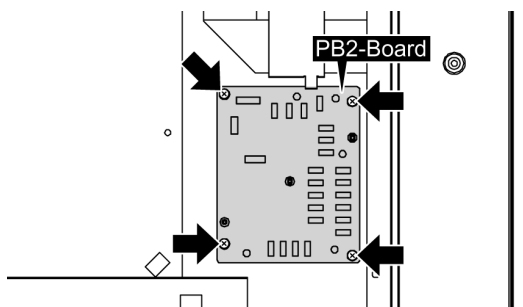
9.17. Removal of F1-Board

1. Disconnect the connectors (F11, F12, F13, F14, F15, F16, F19, F51, F52, F53, F54, F55, F56).
2. Remove 6 screws and then remove F1-Board.

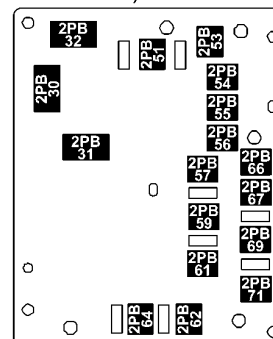


9.18. Removal of PB2-Board

1. Disconnect the connectors (2PB30, 2PB31, 2PB32, 2PB51, 2PB53, 2PB54, 2PB55, 2PB56, 2PB57, 2PB59, 2PB61, 2PB62, 2PB64, 2PB66, 2PB67, 2PB69, 2PB71).
2. Remove 4 screws and then remove PB2-Board.

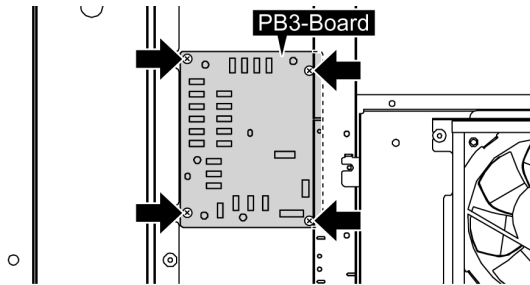


(PB2-Board Detailed View)

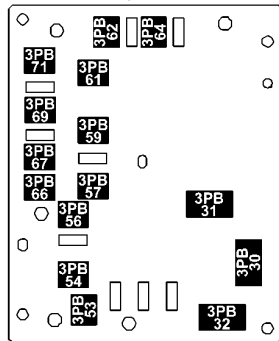


9.19. Removal of PB3-Board

1. Disconnect the connectors (3PB30, 3PB31, 3PB32, 3PB53, 3PB54, 3PB56, 3PB57, 3PB59, 3PB61, 3PB62, 3PB64, 3PB66, 3PB67, 3PB69, 3PB71).
2. Remove 4 screws and then remove PB3-Board.

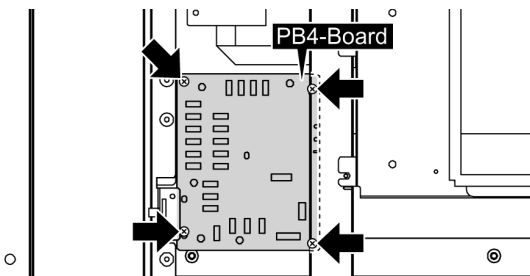


(PB3-Board Detailed View)

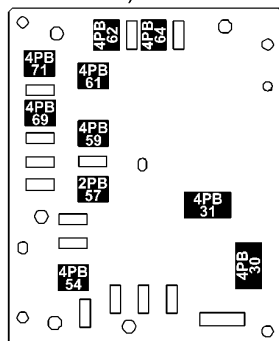


9.20. Removal of PB4-Board

1. Disconnect the connectors (4PB30, 4PB31, 4PB54, 4PB57, 4PB59, 4PB61, 4PB62, 4PB64, 4PB69, 4PB71).
2. Remove 4 screws and then remove PB4-Board.

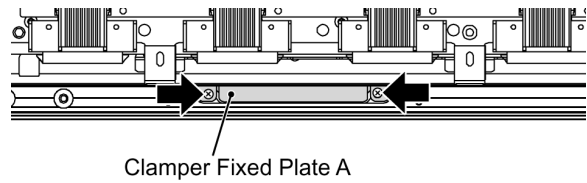


(PB4-Board Detailed View)

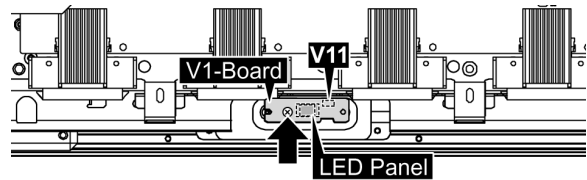


9.21. Removal of V1-Board

1. Remove 2 screws and then remove Clamper Fixed Plate A.

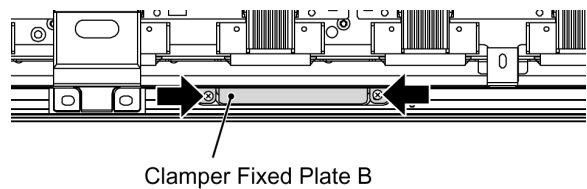


2. Remove 1 screw and then remove V1-Board.
3. Disconnect the connector (V11) and then remove V1-Board.

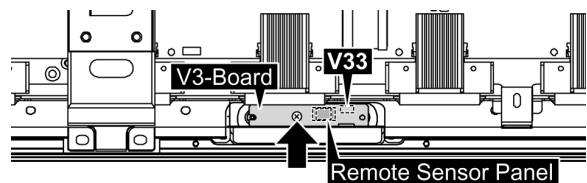


9.22. Removal of V3-Board

1. Remove 2 screws and then remove Clamper Fixed Plate B.

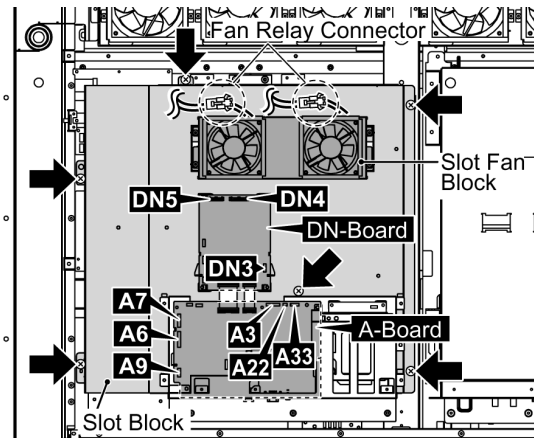


2. Remove 1 screw and then remove V3-Board.
3. Disconnect the connector (V33) and then remove V3-Board and Remote Sensor Panel.



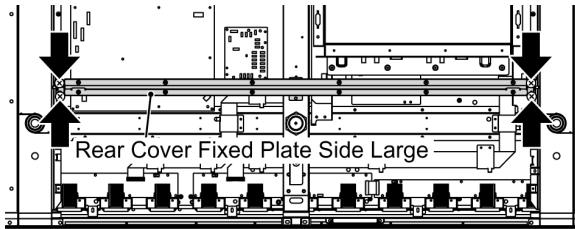
9.23. Removal of Slot Block

1. Disconnect the connectors (A3, A6, A7, A9, A22, A33, DN3, DN4, DN5, Fan Relay Connector).
2. Remove 6 screws and then slide the Slot Block.

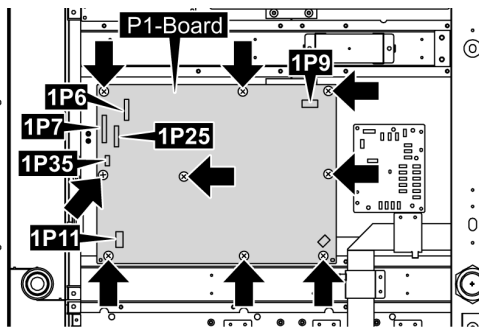


9.24. Removal of P1-Board

1. Remove the Slot Block.
(Refer to Removal of Slot Block)
2. Remove 4 screws and then remove Rear Cover Fixed Plate Side Large.



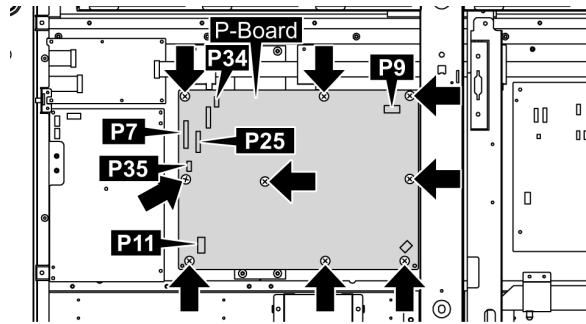
3. Disconnect the connectors (1P6, 1P7, 1P9, 1P11, 1P25, 1P35).
4. Remove 9 screws and then remove P1-Board.



9.25. Removal of P-Board

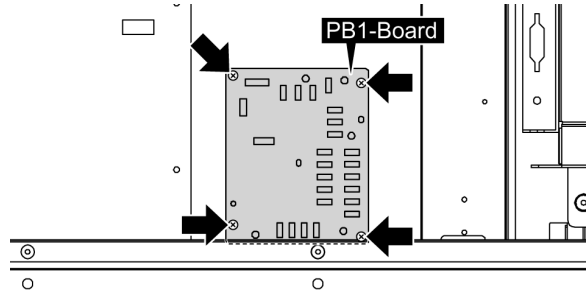
1. Remove the Slot Block.
(Refer to Removal of Slot Block)
2. Disconnect the connectors (P7, P9, P11, P25, P34, P35).

3. Remove 9 screws and then remove P-Board.

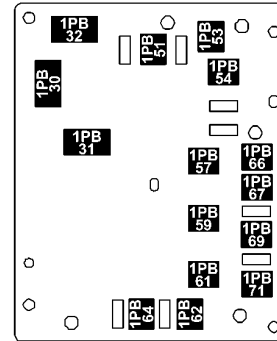


9.26. Removal of PB1-Board

1. Remove the Slot Block.
(Refer to Removal of Slot Block)
2. Disconnect the connectors (1PB30, 1PB31, 1PB32, 1PB51, 1PB53, 1PB54, 1PB57, 1PB59, 1PB61, 1PB62, 1PB64, 1PB66, 1PB67, 1PB69, 1PB71).
3. Remove 4 screws and then remove PB1-Board.

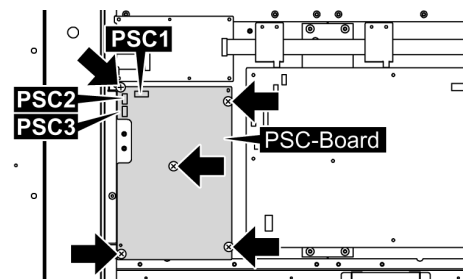


(PB1-Board Detailed View)



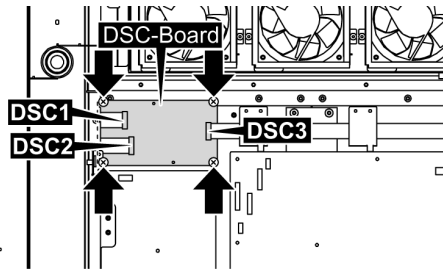
9.27. Removal of PSC-Board

1. Remove the Slot Block.
(Refer to Removal of Slot Block)
2. Disconnect the connectors (PSC1, PSC2, PSC3).
3. Remove 5 screws and then remove PSC-Board.



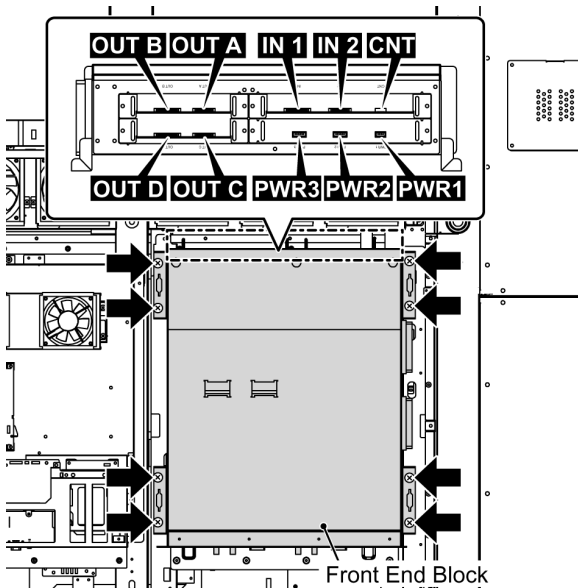
9.28. Removal of DSC-Board

1. Remove the Slot Block.
(Refer to Removal of Slot Block)
2. Remove the flexible cables from the connectors (DSC1, DSC2, DSC3).
3. Remove 4 screws and then remove DSC-Board.



9.29. Removal of Front End Block

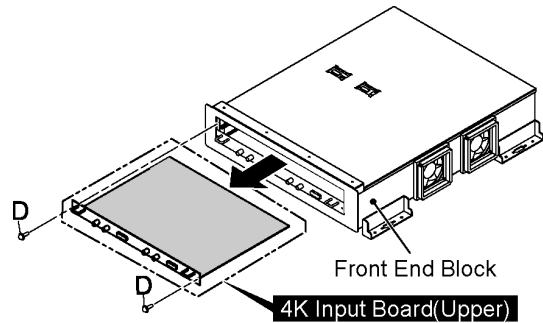
1. Remove the Rear Cover Fixed Plate Side Large.
(Refer to Removal of P1-Board)
2. Disconnect the connectors (CNT, IN1 ,IN2, OUT A, OUT B, OUT C, OUT D , PWR1 ,PWR2 , PW3).
3. Remove 8 screws and then remove Front End Block.



9.30. Removal of 4K Input Board (Upper)

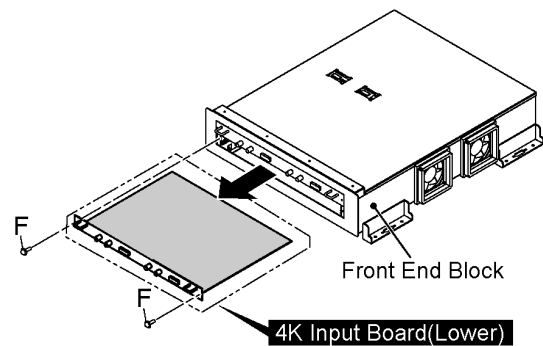
1. Remove the Front End Block.
(Refer to Removal of Front End Block)

2. Remove 2 screws (D) and then remove the 4K Input Board (Upper).



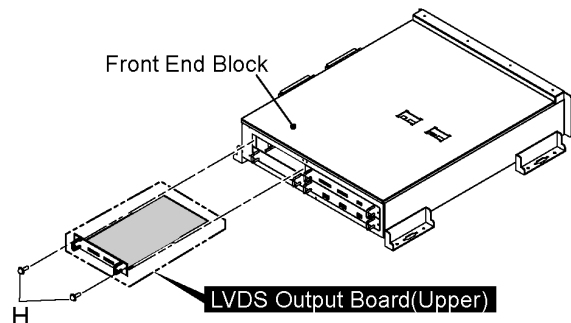
9.31. Removal of 4K Input Board (Lower)

1. Remove the Front End Block.
(Refer to Removal of Front End Block)
2. Remove 2 screws (F) and then remove the 4K Input Board (Lower).



9.32. Removal of LVDS Output Board (Upper)

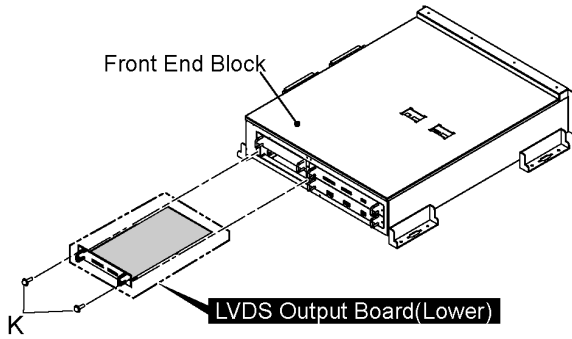
1. Remove the Front End Block.
(Refer to Removal of Front End Block)
2. Remove 2 screws (H) and then remove the LVDS Output Board (Upper).



9.33. Removal of LVDS Output Board (Lower)

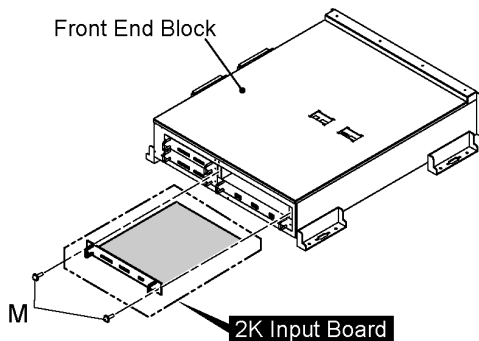
1. Remove the Front End Block.
(Refer to Removal of Front End Block)

2. Remove 2 screws (K) and then remove the LVDS Output Board (Lower).



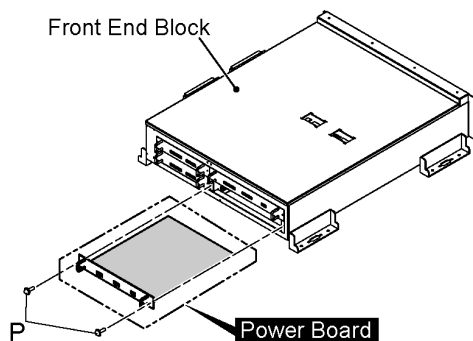
9.34. Removal of 2K Input Board

1. Remove the Front End Block.
(Refer to Removal of Front End Block)
2. Remove 2 screws (M) and then remove the 2K Input Board.



9.35. Removal of Power Board

1. Remove the Front End Block.
(Refer to Removal of Front End Block)
2. Remove 2 screws (P) and then remove the Power Board.

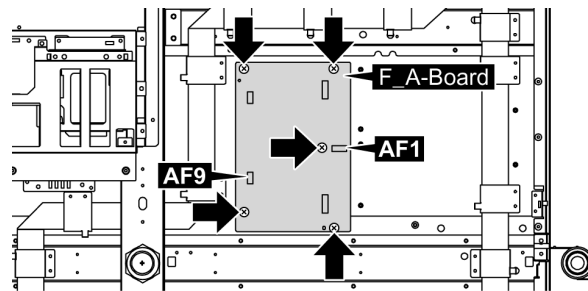


9.36. Removal of Exterior Chassis

1. Remove the Front End Block.
(Refer to Removal of Front End Block)
2. Remove the 4K Input Board (Upper).
(Refer to Removal of 4K Input Board (Upper))
3. Remove the 4K Input Board (Lower).
(Refer to Removal of 4K Input Board (Lower))
4. Remove the LVDS Output Board (Upper).
(Refer to Removal of LVDS Output Board (Upper))
5. Remove the LVDS Output Board (Lower).
(Refer to Removal of LVDS Output Board (Lower))
6. Remove the 2K Input Board.
(Refer to Removal of 2K Input Board)
7. Remove the Power Board.
(Refer to Removal of Power Board)
8. After removal of six boards by above step 2 to 7, there remained Metal Box with Center Connection Board which named Exterior Chassis.

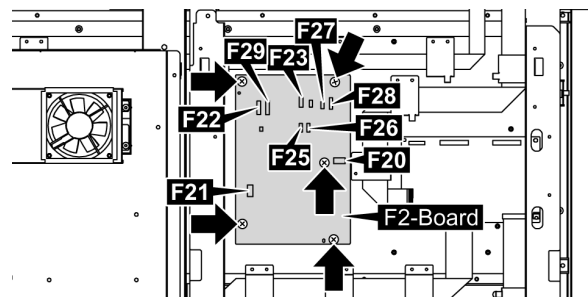
9.37. Removal of F_A-Board

1. Remove the Front End Block.
(Refer to Removal of Front End Block)
2. Disconnect the connectors (AF1, AF9).
3. Remove 5 screws and then remove F_A-Board.



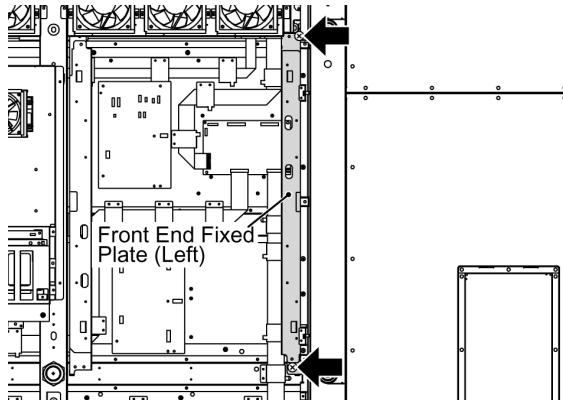
9.38. Removal of F2-Board

1. Remove the Front End Block.
(Refer to Removal of Front End Block)
2. Disconnect the connectors (F20, F21, F22, F23, F25, F26, F27, F28, F29).
3. Remove 5 screws and then remove F2-Board.

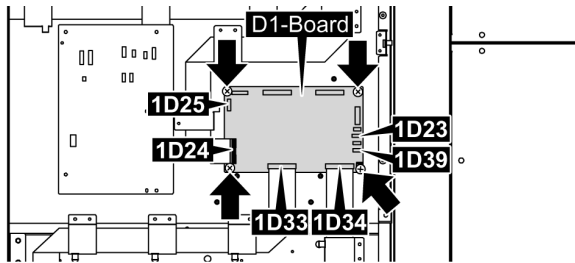


9.39. Removal of D1(D_AD)-Board

1. Remove the Front End Block.
(Refer to Removal of Front End Block)
2. Remove 2 screws and then remove Front End Fix Plate (left).



3. Disconnect the connectors (1D23, 1D25, 1D39).
4. Remove the flexible cables from the connectors (1D24, 1D33, 1D34).
5. Remove 4 screws and then remove D1(D_AD)-Board.

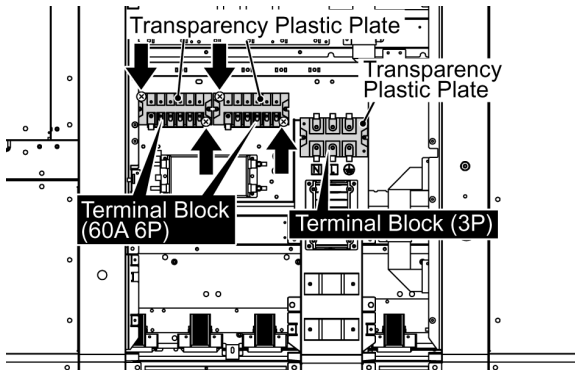


Note:

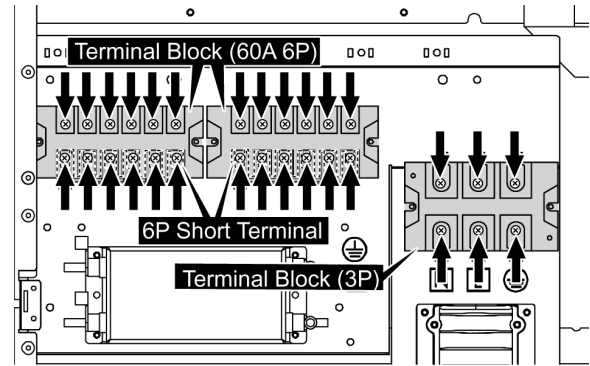
Check and set to the same software version of D1, D2, D3, D4-Board after D1-Board exchange.

9.40. Removal of Terminal Block

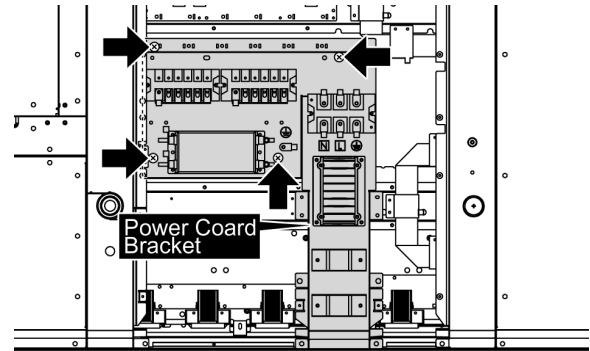
1. Remove each 2 screw from the Terminal Block (60A 6P) and then remove the Transparency Plastic Plate
2. Remove the Transparency Plastic Plate from Terminal Block (3P).



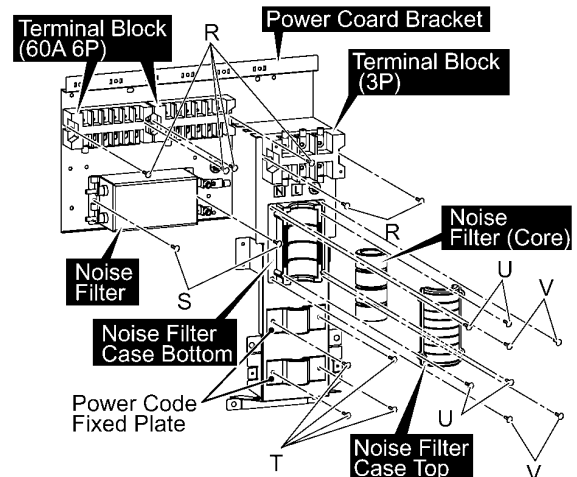
3. Remove each 12 screws and then remove the Terminal Block (60A 6P) and 6P Short Terminal.
4. Remove each 6 screws and then remove the Terminal Block (3P).



5. Remove 4 screws and then remove the Power Cord Bracket.



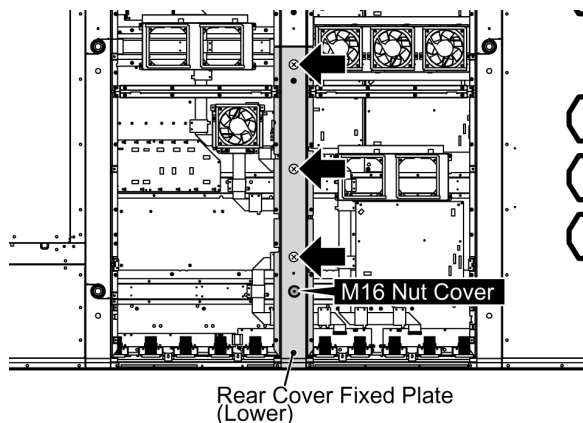
6. Remove each 2 screws (R) and then remove the Terminal Block (60A 6P) and Terminal Block (3P).
7. Remove 2 screws (S) and then remove the Noise Filter.
8. Remove 2 screws (T) and then remove the Power Code Fixed Plate.
9. Remove 4 screws (U) and then remove the Noise Filter Case Bottom, Noise Filter Case Top, Noise Filter (Core) and Power Cord Bracket.
10. Remove 4 screws (V) and then remove the Noise Filter Case Bottom.



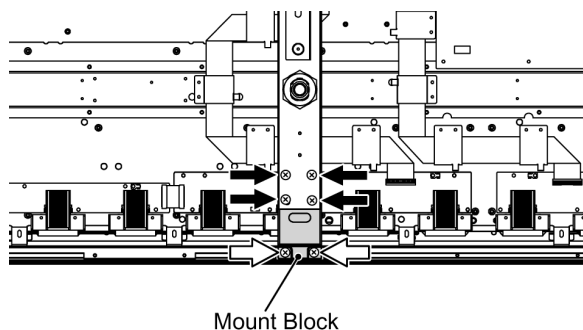
9.41. Removal of CL(C3)-Board

1. Remove the Terminal Block.
(Refer to Removal of Terminal Block)
2. Remove the M16 Nut Cover.

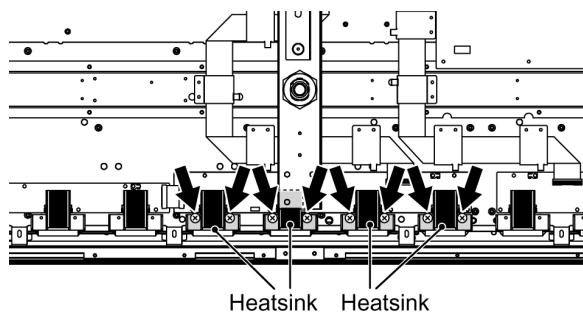
3. Remove 3 screws (⬆) and then remove Rear Cover Fixed Plate (Lower).



4. Remove 4 screws (⬆).
5. Remove 2 screws (⬆) and then slide the Mount Block downward.

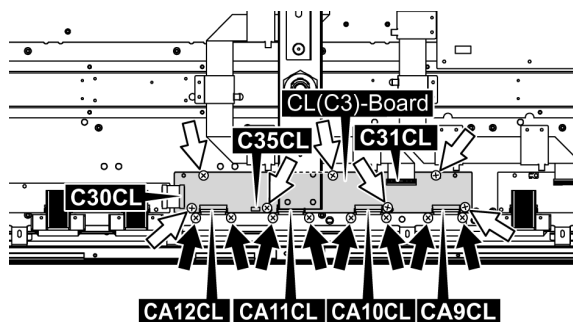


6. Remove each 2 screws and then remove the Heatsink.



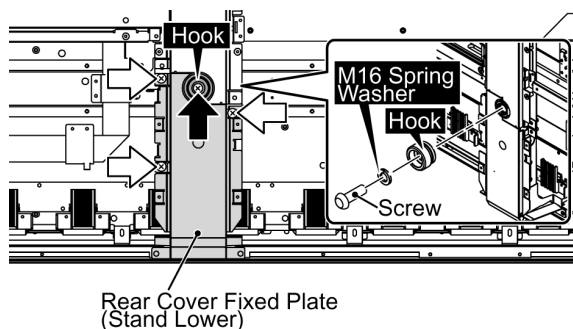
7. Disconnect the connector(C35CL).
8. Remove the flexible cables from the connectors (C30CL , C31CL).
9. Remove 8 screws (⬆) and then remove the flexible cables from the connectors (CA9CL, CA10CL, CA11CL, CA12CL).

10. Remove 7 screws (⬆) and then remove CL(C3)-Board .

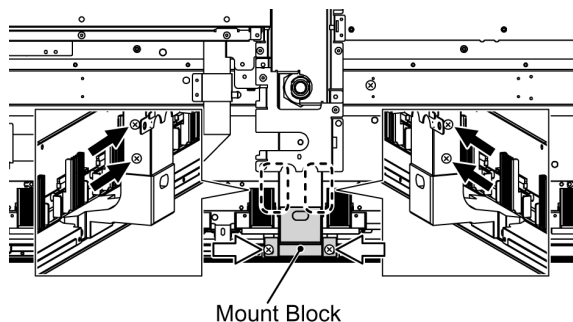


9.42. Removal of CM(C4)-Board

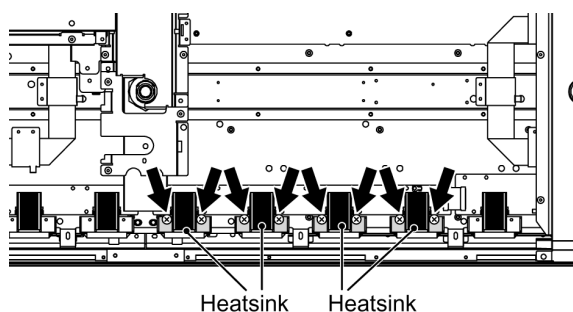
1. Remove the Terminal Block.
(Refer to Removal of Terminal Block)
2. Remove 1 screw (⬆) and then remove Hook and M16 Spring Washer.
3. Remove 3 screws (⬆) and then remove Rear Cover Fixed Plate (Stand Lower).



4. Remove 4 screws (⬆).
5. Remove 2 screws (⬆) and then slide the Mount Block downward.

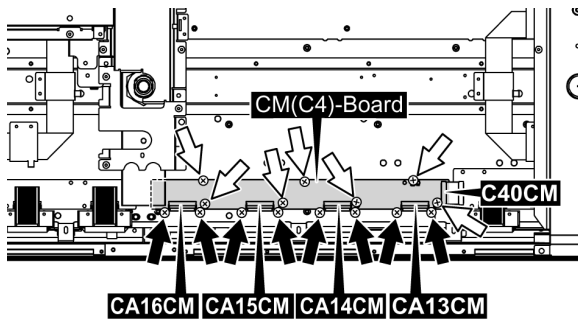


6. Remove each 2 screws and then remove the Heatsink.



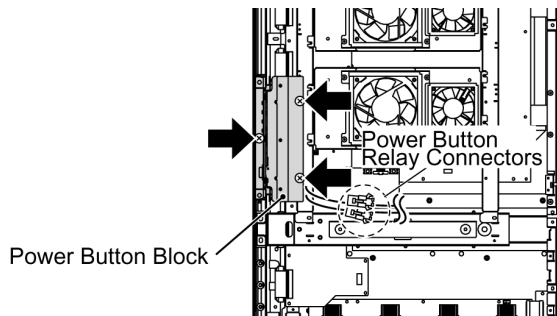
7. Remove the flexible cable from the connector (C40CM).

8. Remove 8 screws (▲) and then remove the flexible cables from the connectors (CA13CM, CA14CM, CA15CM, CA16CM).
9. Remove 7 screws (◀) and then remove CM(C4)-Board.



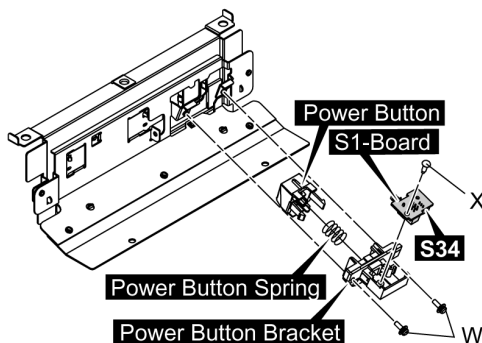
9.43. Removal of Power Button Block

1. Remove Power Button Realy Connectors.
2. Remove 3 screws and then remove Power Button Block.



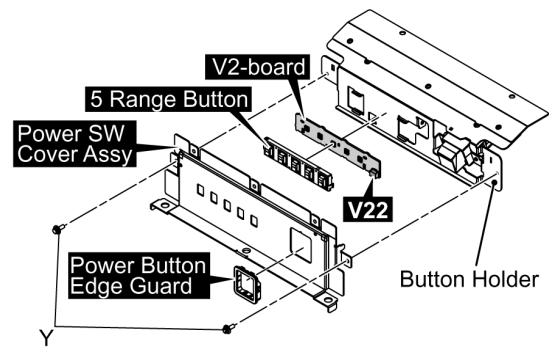
9.43.1. Removal of S1-Board

1. Remove 2 screws (W) and then remove the Power Button Bracket.
2. Remove 1 screw (X).
3. Disconnect the connector (S34) and then remove S1-Board.
4. Remove 2 hooks and then remove the Power Button and Power Button Spring.



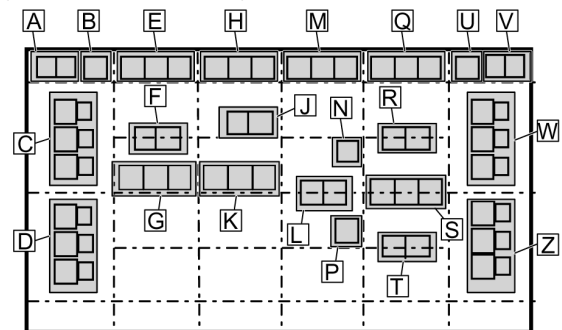
9.43.2. Removal of V2-board

1. Remove 2 screws (Y) and then remove the Power SW Cover Assy and Power Edge Guard.
2. Disconnect the connector (V22) and then remove V2-Board.
3. Remove 2 hooks and then remove the 5 Range Button from V2-Board.



9.44. Removal of Fan

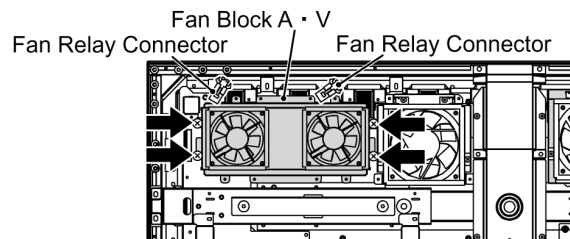
(Fan Block Number List)



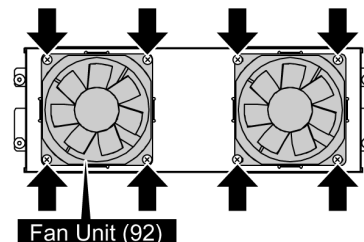
1. Remove Fan Block.

-Remove Fan Block A and V, and removal of Fan Unit

- a. Disconnect the Fan Realy Connectors.
- b. Remove 4 screws and then remove Fan Block A and V.



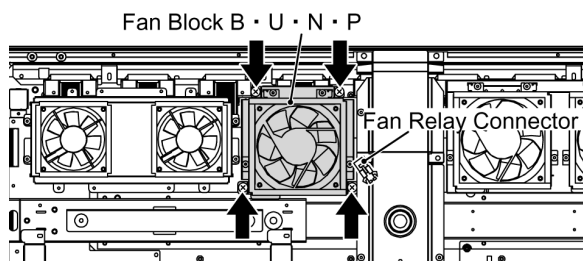
- c. Fan Block is turned inside out.
- d. Remove each 4 screws and then remove Fan Unit (92).



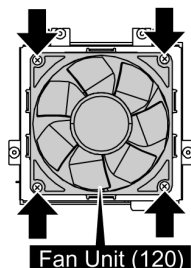
-Remove Fan Block B, N, U and P, and removal of Fan Unit.

- a. Disconnect the Fan Realy Connector.

- b. Remove 4 screws and then remove Fan Block B, N, U and P.

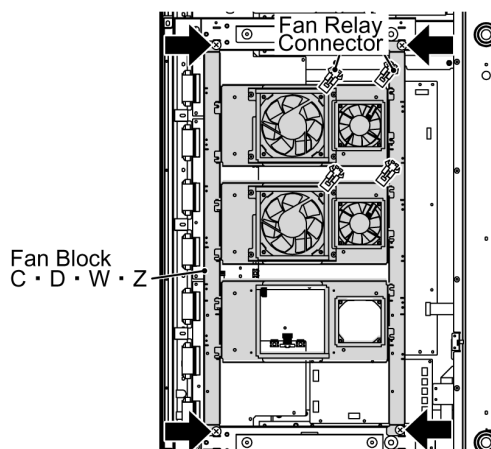


- c. Fan Block is turned inside out.
d. Remove 4 screws and then remove Fan Unit (120).



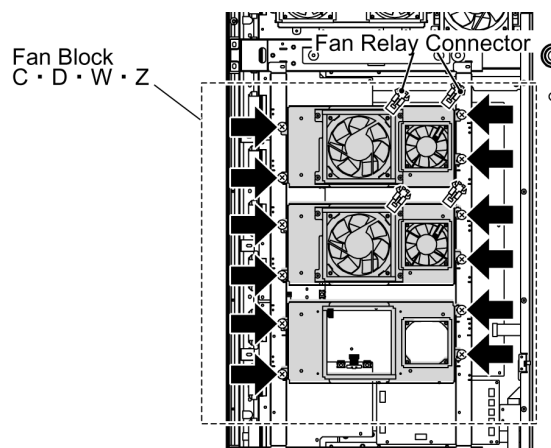
-Remove Fan Block C, D, W and Z

- a. Remove the Power Button Block.
(Refer to Removal of Power Button Block)
b. Disconnect the Fan Realy Connector.
c. Remove 4 screws and then remove Fan Block C, D, W and Z.

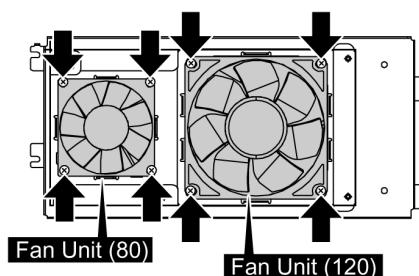


-Removal of Fan Unit of Fan Block C, D, W and Z

- a. Remove the Power Button Block.
(Refer to Removal of Power Button Block)
b. Disconnect the Fan Realy Connectors.
c. Remove each 4 screws and then remove Fan Block C, D, W and Z.

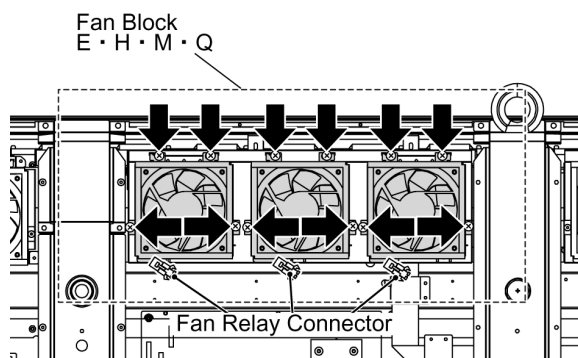


- d. Fan Block is turned inside out.
e. Remove each 4 screws and then remove Fan Unit (80) and Fan Unit (120).

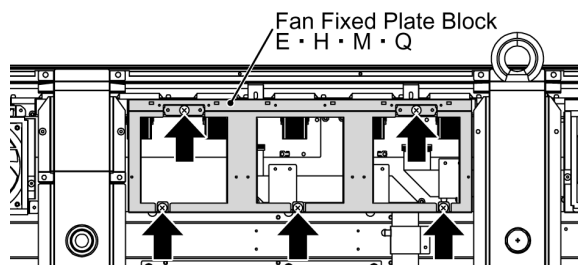


-Remove Fan Block E, H, M and Q

- a. Disconnect the Fan Realy Connector.
b. Remove each 4 screws and then remove Fan Unit from Fan Block E, H, M and Q.



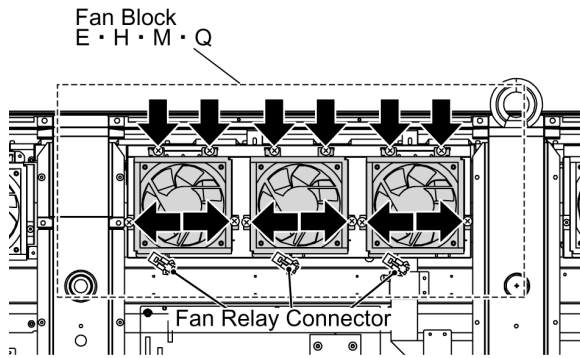
- c. Remove 5 screws and then remove Fan Fixed Plate Block.



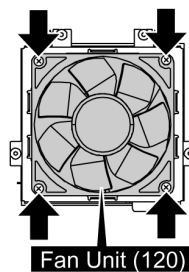
-Removal of Fan Unit of Fan Block E, H, M and Q

- a. Disconnect the Fan Realy Connector.

- b. Remove each 4 screws and then remove Fan Unit from Fan Block E, H, M and Q.

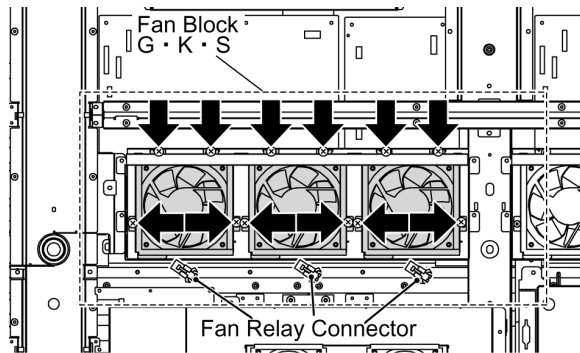


- c. Fan Block is turned inside out.
d. Remove 4 screws and then remove Fan Unit (120).

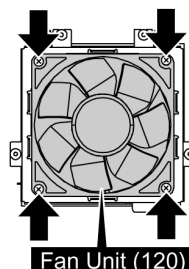


-Remove Fan Block G, K and S, and removal of Fan Uni.

- a. Disconnect the Fan Realy Connectors.
b. Remove 4 screws and then remove Fan Block G, K and S.

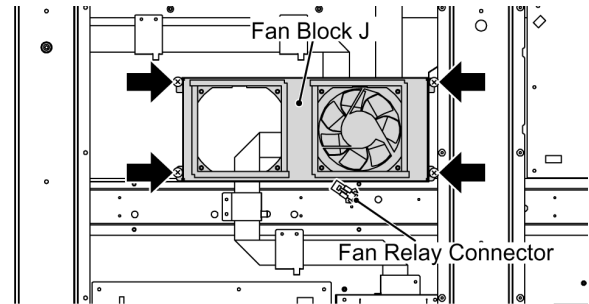


- c. Fan Block is turned inside out.
d. Remove each 4 screws and then remove Fan Unit (120).

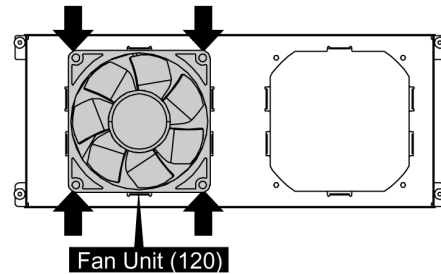


-Remove Fan Block J, and removal of Fan Unit

- a. Disconnect the Fan Realy Connector.
b. Remove 4 screws and then remove Fan Block J.

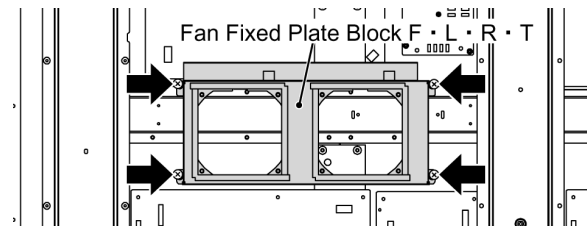


- c. Fan Block is turned inside out.
d. Remove each 4 screws and then remove Fan Unit (120).



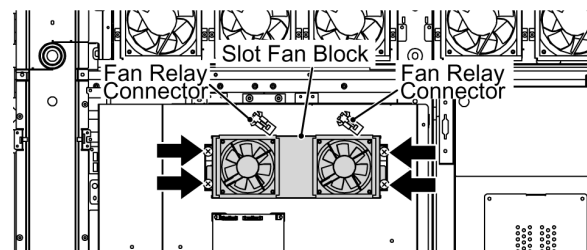
-Remove Fan Fixed Plate Block F, L, R and T

- a. Remove 4 screws and then remove Fan Fixed Plate Block F, L, R and T.

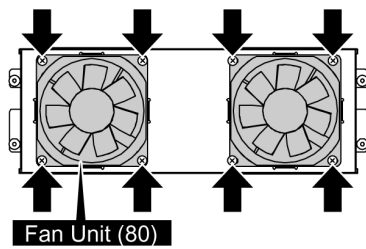


-Remove Slot Fan Block and removal of Fan Unit

- a. Disconnect the Fan Realy Connectors.
b. Remove 4 screws and then remove Slot Fan Block.



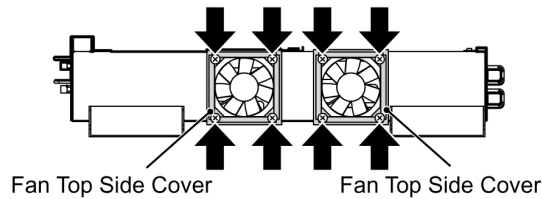
- c. Fan Block is turned inside out.
d. Remove each 4 screws and then remove Fan Unit (80).



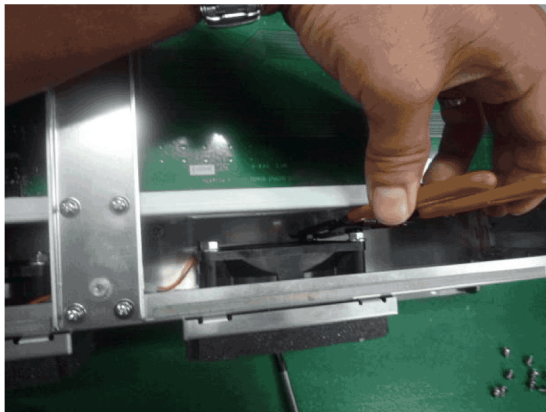
-Remove Front End Fan Block and removal of Fan Unit

- Remove the Front End Block.
(Refer to Removal of Front End Block)
- Remove the Top Panel.
(Refer to Removal of Exterior Board)
- Remove each 4 screws and then remove the Fan Top Side Cover.

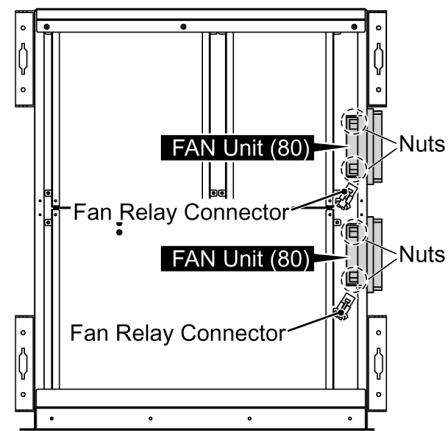
(Front End Side View)



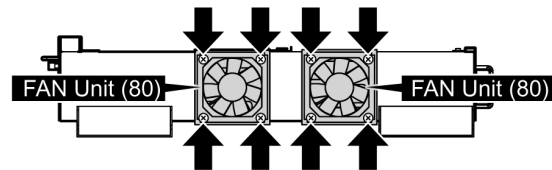
- Disconnect the Fan Realy Connectors.
- Remove each 4 screws with placing the nut by needle nose pliers.
- Remove the Fan Unit (80).



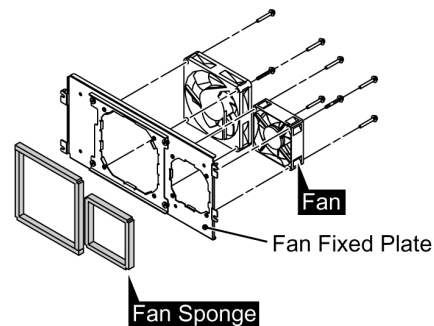
(Front End Top view)



(Front End Side view)



- Reassemble the Fans in reverse order.
- Stick the Fan Sponge around the Fan.



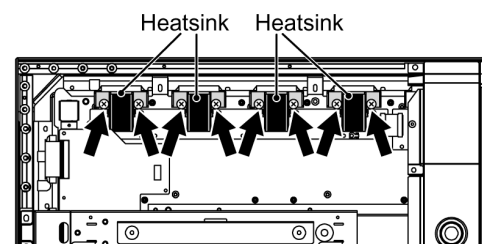
Detail figure of reassembling the Fan

Note:

The Fan Sponge is not re-usable.
Please use a new one when Fan exchange.

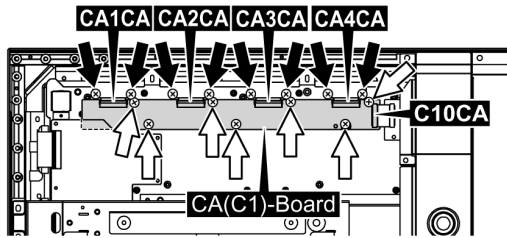
9.45. Removal of CA(C1)-Board

- Remove the Fan Block A and B.
(Refer to Removal of Fan)
- Remove each 2 screws and then remove the Heatsink.



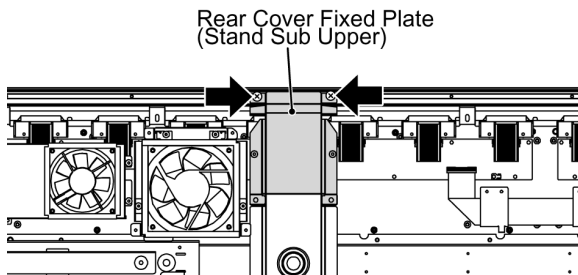
- Remove the flexible cable from the connector (C10CA).

4. Remove 8 screws (⬆) and then remove the flexible cables from the connectors (CA1CA, CA2CA, CA3CA, CA4CA).
5. Remove 7 screws (⬆) and then remove CA(C1)-Board .

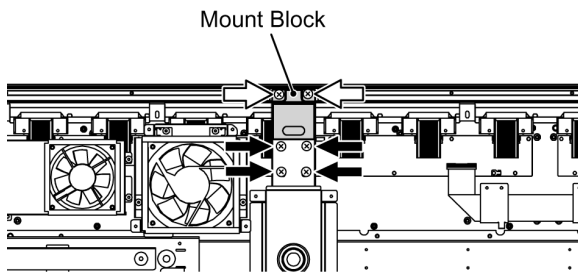


9.46. Removal of CB(C2)-Board

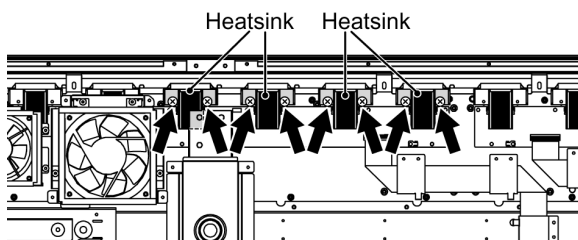
1. Remove the Fan Block B and E.
(Refer to Removal of Fan)
2. Remove 2 screws and then remove Rear Cover Fixed Plate (Stand Sub Upper).



3. Remove 4 screws (⬆).
4. Remove 2 screws (⬆) and then slide the Mount Block upward.

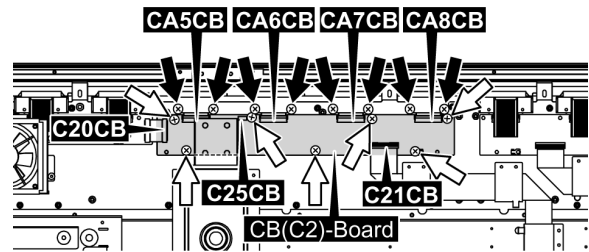


5. Remove each 2 screws and then remove the Heatsink.



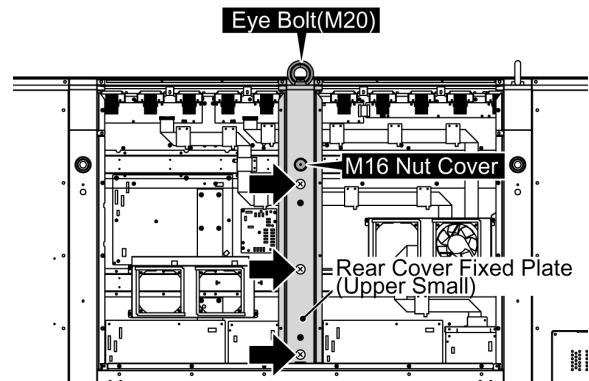
6. Disconnect the connector(C25CB).
7. Remove the flexible cables from the connectors (C20CB, C21CB).
8. Remove 8 screws (⬆) and then remove the flexible cables from the connectors (CA5CB, CA6CB, CA7CB, CA8CB).

9. Remove 7 screws (⬆) and then remove CB(C2)-Board .

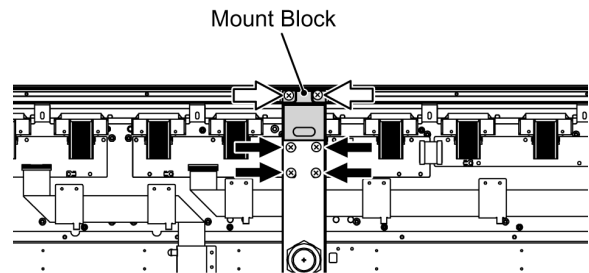


9.47. Removal of CC(C3)-Board

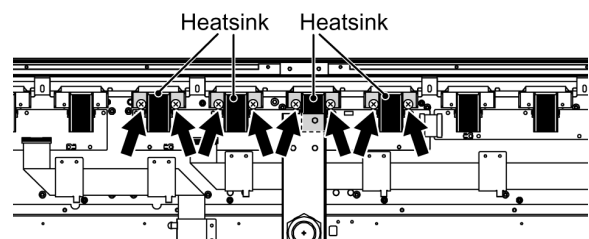
1. Remove the Fan Block E and H.
(Refer to Removal of Fan)
2. Remove the Eye Bolt (M20).
3. Remove the M16 Nut Cover.
4. Remove 3 screws and then remove Rear Cover Fixed Plate (Upper Small).



5. Remove 4 screws (⬆).
6. Remove 2 screws (⬆) and then slide the Mount Block upward.

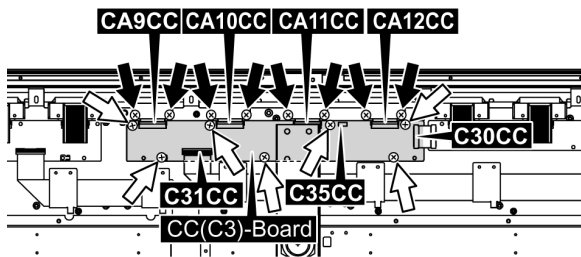


7. Remove each 2 screws and then remove the Heatsink.



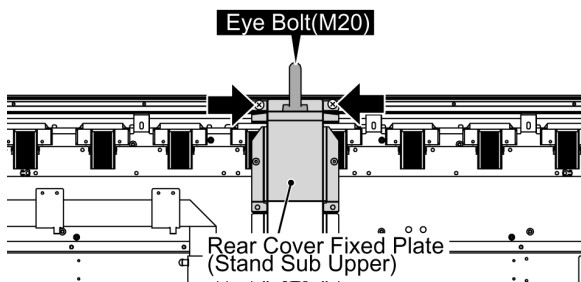
8. Disconnect the connector(C35CC).

9. Remove the flexible cables from the connectors (C30CC, C31CC).
10. Remove 8 screws (⬆) and then remove the flexible cables from the connectors (CA9CC, CA10CC, CA11CC, CA12CC).
11. Remove 7 screws (⬆) and then remove CC(C3)-Board.

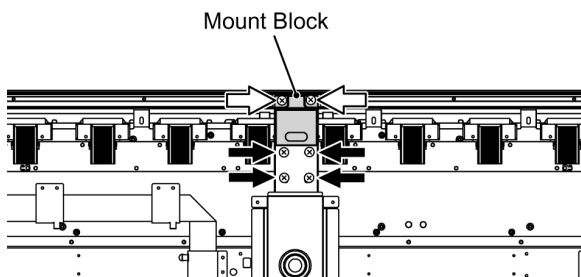


9.48. Removal of CD(C4)-Board

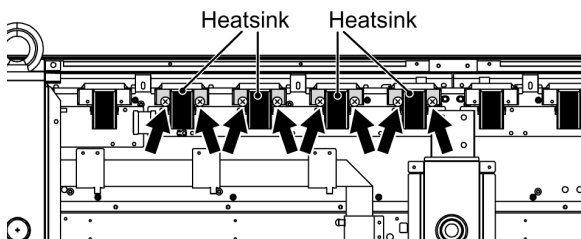
1. Remove the Fan Block H and M.
(Refer to Removal of Fan)
2. Remove the Eye Bolt (M20).
3. Remove 2 screws and then remove Rear Cover Fixed Plate (Stand Sub Upper).



4. Remove 4 screws (⬆).
5. Remove 2 screws (⬆) and then slide the Mount Block upward.

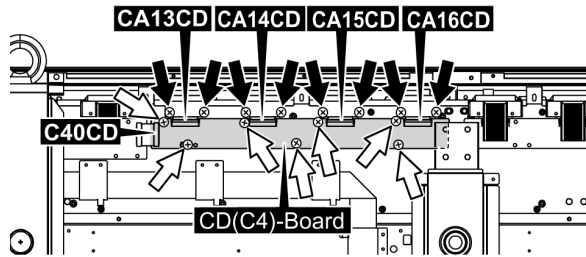


6. Remove each 2 screws and then remove the Heatsink.



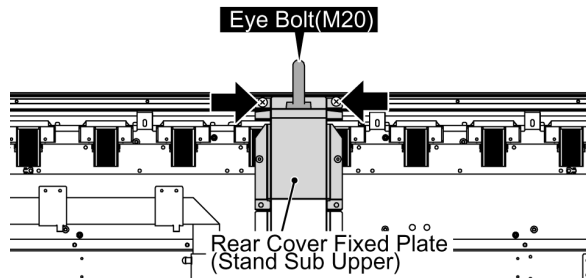
7. Remove the flexible cable from the connector (C40CD).

8. Remove 8 screws (⬆) and then remove the flexible cables from the connectors (CA13CD, CA14CD, CA15CD, CA16CD).
9. Remove 7 screws (⬆) and then remove CD(C4)-Board.

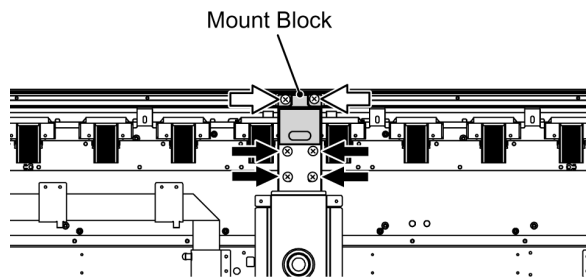


9.49. Removal of CE(C1)-Board

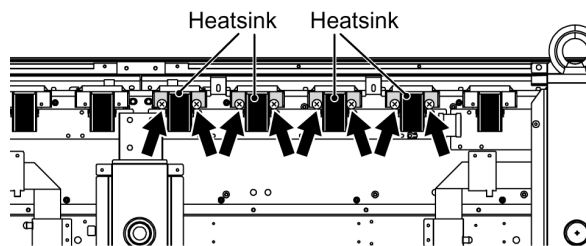
1. Remove the Fan Block H and M.
(Refer to Removal of Fan)
2. Remove the Eye Bolt (M20).
3. Remove 2 screws and then remove Rear Cover Fixed Plate (Stand Sub Upper).



4. Remove 4 screws (⬆).
5. Remove 2 screws (⬆) and then slide the Mount Block upward.

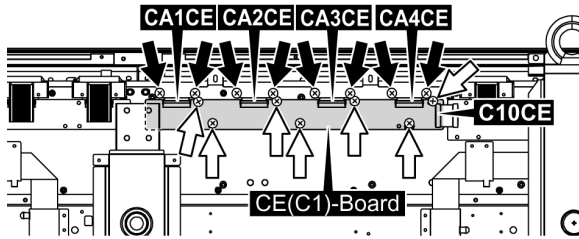


6. Remove each 2 screws and then remove the Heatsink.



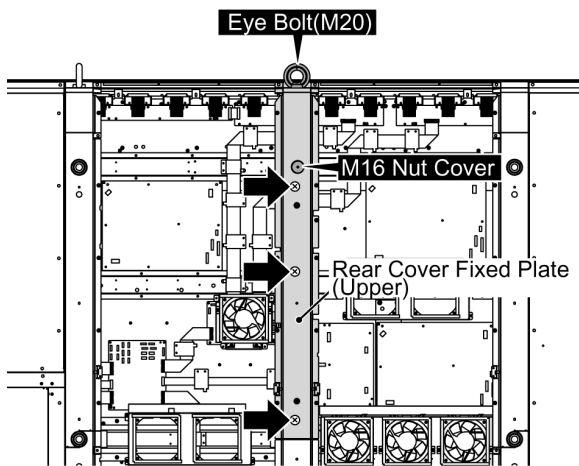
7. Remove the flexible cable from the connector (C10CE).
8. Remove 8 screws (⬆) and then remove the flexible cables from the connectors (CA1CE, CA2CE, CA3CE, CA4CE).

9. Remove 7 screws (⬆) and then remove CE(C1)-Board .

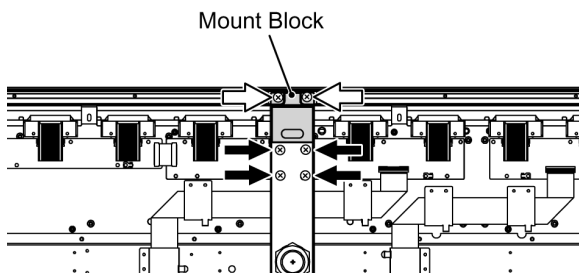


9.50. Removal of CF(C2)-Board

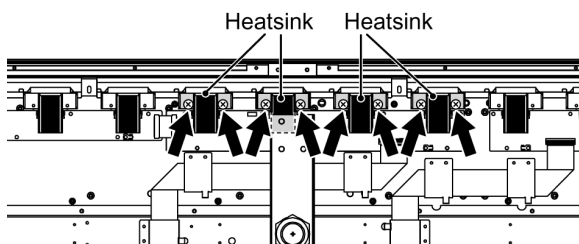
1. Remove the Fan Block M and Q.
(Refer to Removal of Fan)
2. Remove the Eye Bolt (M20).
3. Remove the M16 Nut Cover.
4. Remove 3 screws and then remove Rear Cover Fixed Plate (Upper).



5. Remove 4 screws (⬆).
6. Remove 2 screws (⬆) and then slide the Mount Block upward.

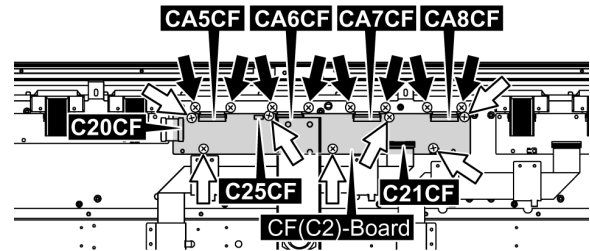


7. Remove each 2 screws and then remove the Heatsink.



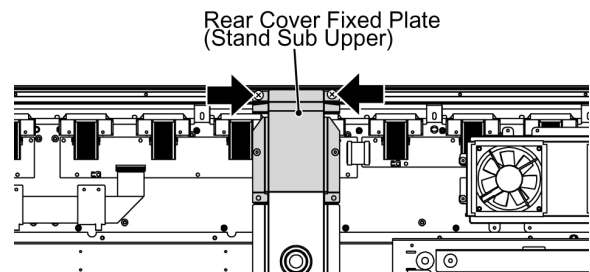
8. Disconnect the connector(C25CF).

9. Remove the flexible cables from the connectors (C20CF , C21CF).
10. Remove 8 screws (⬆) and then remove the flexible cables from the connectors (CA5CF, CA6CF, CA7CF, CA8CF).
11. Remove 7 screws (⬆) and then remove CF(C2)-Board .

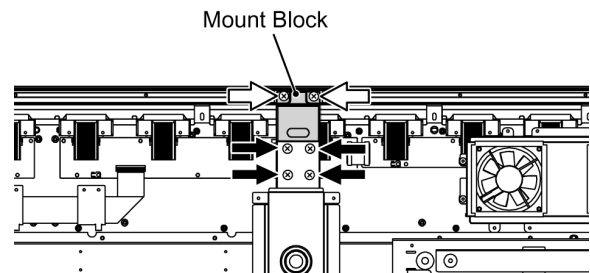


9.51. Removal of CG(C3)-Board

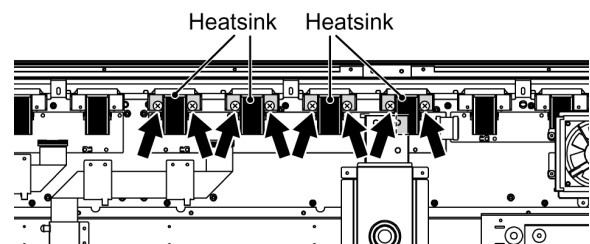
1. Remove the Fan Block Q and U.
(Refer to Removal of Fan)
2. Remove 2 screws and then remove Rear Cover Fixed Plate (Stand Sub Upper).



3. Remove 4 screws (⬆).
4. Remove 2 screws (⬆) and then slide the Mount Block upward.

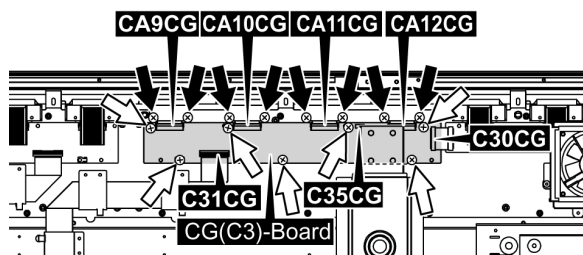


5. Remove each 2 screws and then remove the Heatsink.



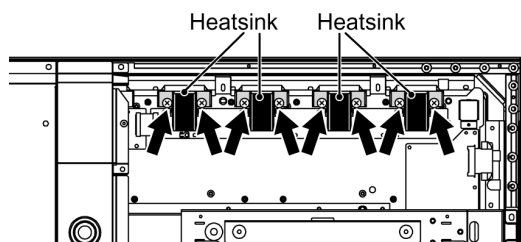
6. Disconnect the connector(C35CG).

7. Remove the flexible cables from the connectors (C30CG, C31CG).
8. Remove 8 screws (⬆) and then remove the flexible cables from the connectors (CA9CG, CA10CG, CA11CG, CA12CG).
9. Remove 7 screws (⬆) and then remove CG(C3)-Board.

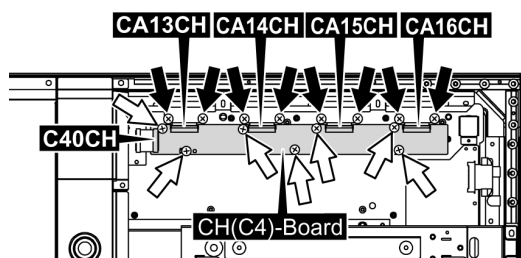


9.52. Removal of CH(C4)-Board

1. Remove the Fan Block U and V.
(Refer to Removal of Fan)
2. Remove each 2 screws and then remove the Heatsink.



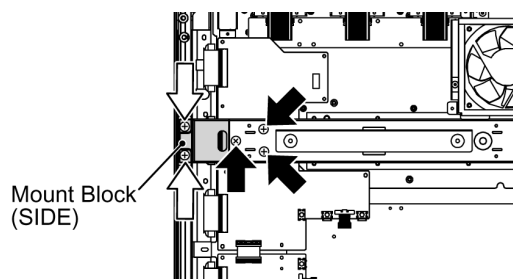
3. Remove the flexible cables from the connectors (C40CH).
4. Remove 8 screws (⬆) and then remove the flexible cables from the connectors (CA13CH, CA14CH, CA15CH, CA16CH).
5. Remove 7 screws (⬆) and then remove CH(C4)-Board.



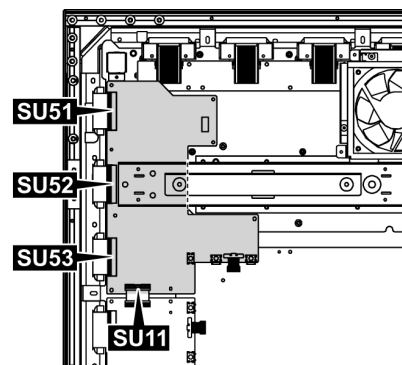
9.53. Removal of SU1-Board

1. Remove the Fan Block A and C.
(Refer to Removal of Fan)
2. Remove 3 screws (⬆).

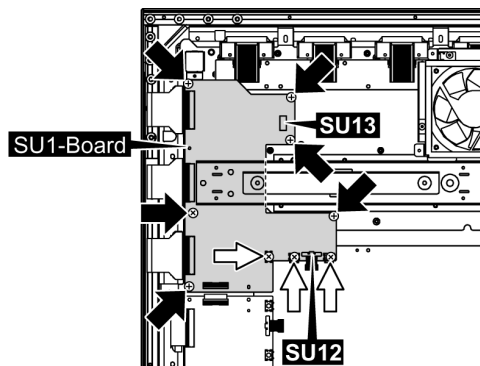
3. Remove 2 screws (⬆) and then slide the Mount Block (SIDE) the left side.



4. Remove the flexible cables from the connectors (SU11, SU51, SU52, SU53).

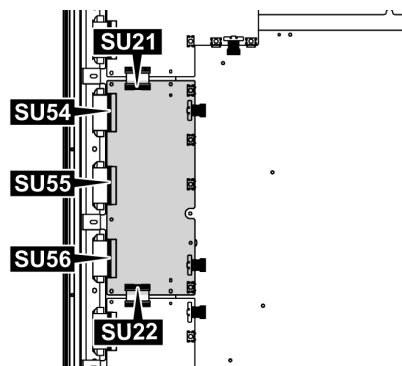


5. Disconnect the connectors (SU12, SU13).
6. Remove 6 screws (⬆).
7. Remove 3 screws (⬆) and then remove SU1-Board.

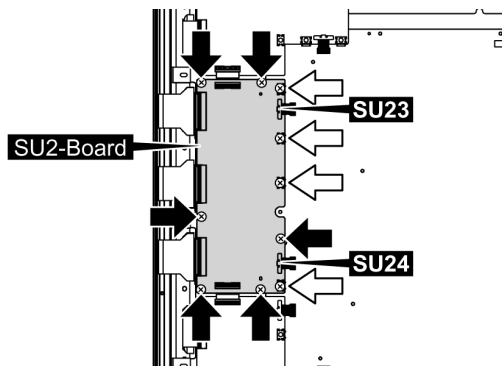


9.54. Removal of SU2-Board

1. Remove the Fan Block C.
(Refer to Removal of Fan)
2. Remove the flexible cables from the connectors (SU21, SU22, SU54, SU55, SU56).

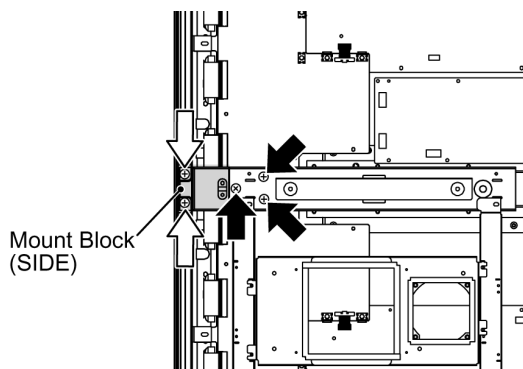


3. Disconnect the connectors(SU23, SU24).
4. Remove 6 screws (⬆).
5. Remove 4 screws (⇅) and then remove SU2-Board .

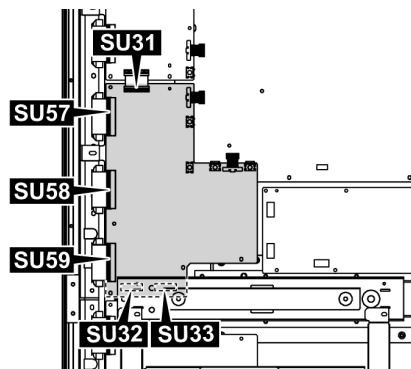


9.55. Removal of SU3-Board

1. Remove the Fan Block C.
(Refer to Removal of Fan)
2. Remove 3 screws (⬆).
3. Remove 2 screws (⇅) and then slide the Mount Block (SIDE) the left side.

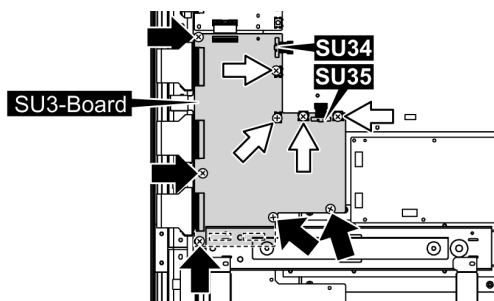


4. Remove the flexible cables from the connectors (SU31, SU32, SU33, SU57, SU58, SU59).



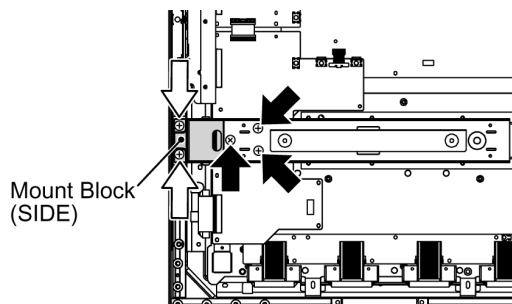
5. Disconnect the connectors (SU34, SU35).
6. Remove 5 screws (⬆).

7. Remove 4 screws (⇅) and then remove SU3-Board .

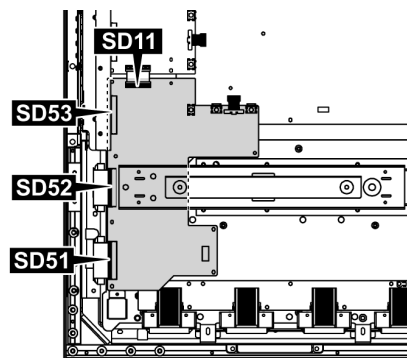


9.56. Removal of SD1-Board

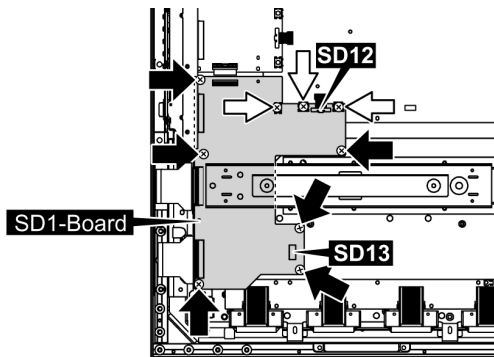
1. Remove the Power Button Block.
(Refer to Removal of Power Button Block)
2. Remove the Fan Block D.
(Refer to Removal of Fan)
3. Remove 3 screws (⬆).
4. Remove 2 screws (⇅) and then slide the Mount Block (SIDE) the left side.



5. Remove the flexible cables from the connectors (SD11, SD51, SD52, SD53).

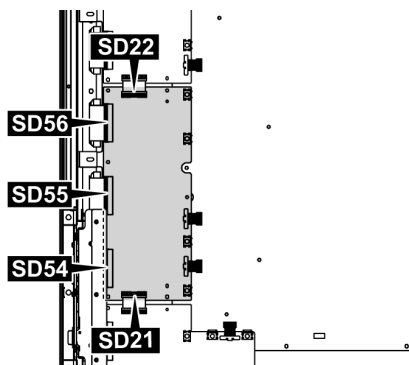


6. Disconnect the connectors(SD12, SD13).
7. Remove 6 screws (⬆).
8. Remove 3 screws (⇅) and then remove SD1-Board .

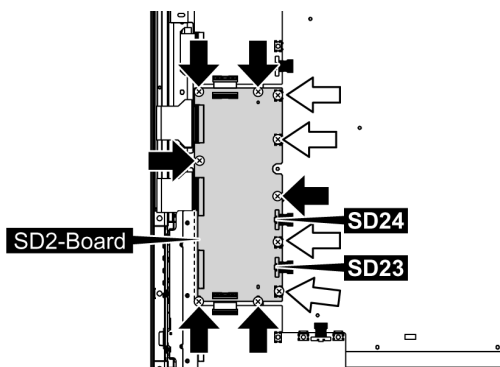


9.57. Removal of SD2-Board

1. Remove the Power Button Block.
(Refer to Removal of Power Button Block)
2. Remove the Fan Block D.
(Refer to Removal of Fan)
3. Remove the flexible cables from the connectors (SD21, SD22, SD54, SD55, SD56).

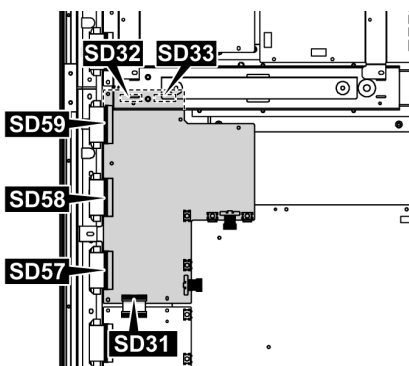


4. Disconnect the connectors(SD23, SD24).
5. Remove 6 screws (↑).
6. Remove 4 screws (↗) and then remove SD2-Board .



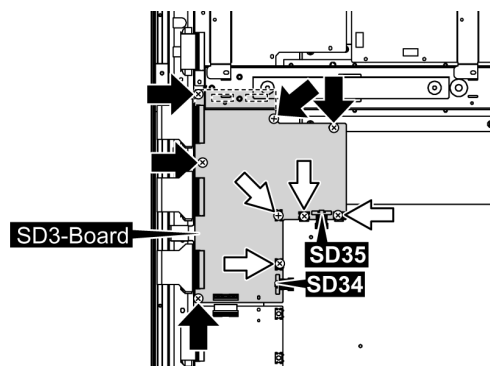
9.58. Removal of SD3-Board

1. Remove the Fan Block D.
(Refer to Removal of Fan)
2. Remove the Mount Block (Side).
(Refer to Removal of SU3-Board)
3. Remove the flexible cables from the connectors (SD31, SD32, SD33, SD57, SD58, SD59).



4. Disconnect the connectors(SD34, SD35).
5. Remove 5 screws (↑).

6. Remove 4 screws (↗) and then remove SD3-Board .

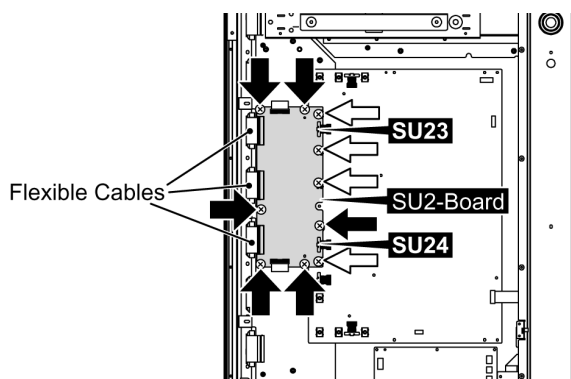


9.59. Removal of SCU-Board

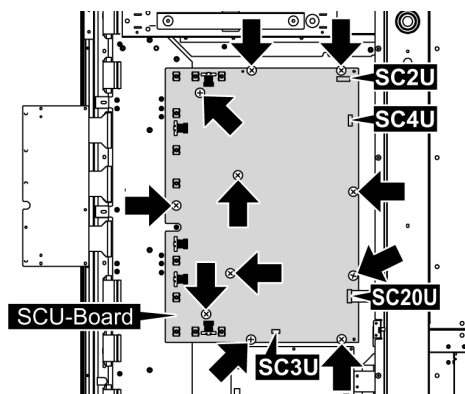
1. Remove the SU1-Board.
(Refer to Removal of SU1-Board)
2. Remove the SU3-Board.
(Refer to Removal of SU3-Board)
3. Remove 6 screws (↑).
4. Disconnect the connectors(SU23, SU24).
5. Remove 4 screws (↗) and then turn over SU2-Board to the left.

Note:

Do not damage the Flexible Cables of SU2-Board, and the parts on SCU-Board.

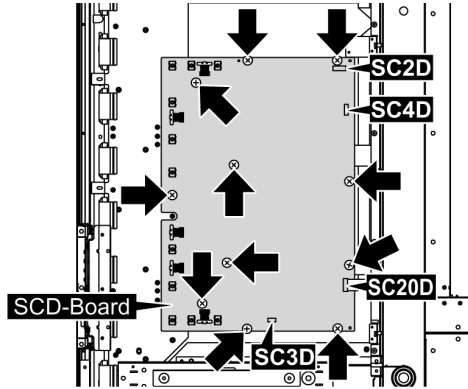


6. Disconnect the connectors(SC2U, SC3U, SC4U).
7. Remove the flexible cable from the connector (SC20U).
8. Remove 11 screws and then remove SCU-Board



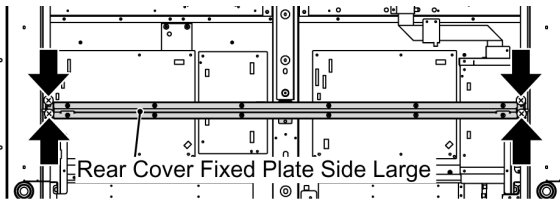
9.60. Removal of SCD-Board

1. Remove the SD1-Board.
(Refer to Removal of SD1-Board)
2. Remove the SD2-Board.
(Refer to Removal of SD2-Board)
3. Remove the SD3-Board.
(Refer to Removal of SD3-Board)
4. Disconnect the connectors(SC2D, SC3D, SC4D).
5. Remove the flexible cable from the connector (SC20D).
6. Remove 11 screws and then remove SCD-Board.

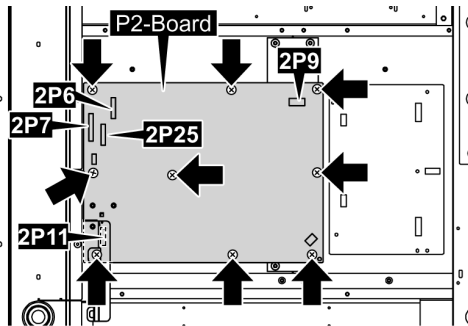


9.61. Removal of P2-Board

1. Remove the Fan Block F and G.
(Refer to Removal of Fan)
2. Remove the Eye Bolt (M20), M16 Nut Cover and Rear Cover Fixed Plate (Upper Small).
(Refer to Removal of CC(C3)-Board)
3. Remove 4 screws and then remove Rear Cover Fixed Plate Side Large.



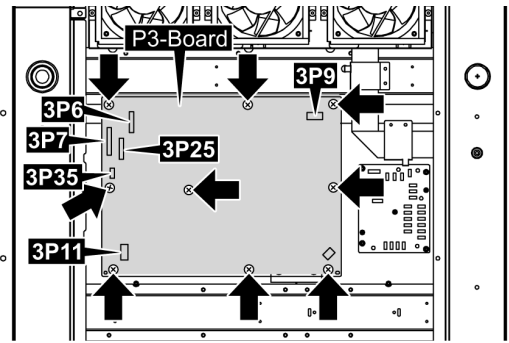
4. Disconnect the connectors (2P6, 2P7, 2P9, 2P11, 2P25).
5. Remove 9 screws and then remove P2-Board.



9.62. Removal of P3-Board

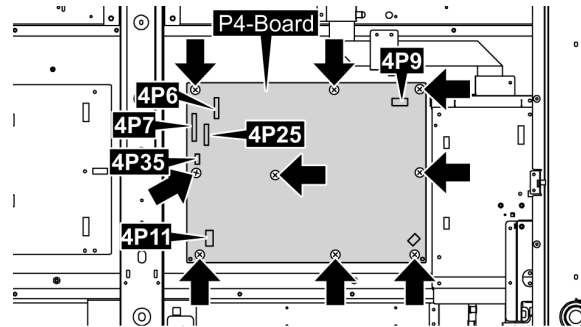
1. Remove the Fan Block F.
(Refer to Removal of Fan)
2. Disconnect the connectors (3P6, 3P7, 3P9, 3P11, 3P25, 3P35).

3. Remove 9 screws and then remove P3-Board.



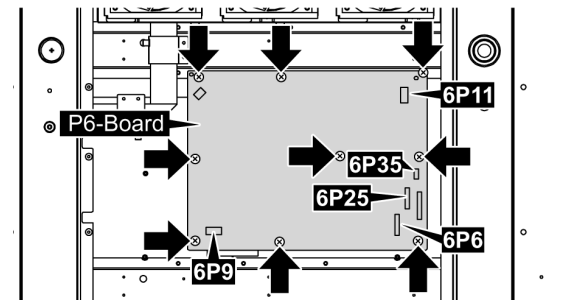
9.63. Removal of P4-Board

1. Remove the Fan Block E, F and K.
(Refer to Removal of Fan)
2. Remove the Eye Bolt (M20), M16 Nut Cover and Rear Cover Fixed Plate (Upper Small).
(Refer to Removal of CC(C3)-Board)
3. Remove the Rear Cover Fixed Plate Side Large.
(Refer to Removal of P2-Board)
4. Disconnect the connectors (4P6, 4P7, 4P9, 4P11, 4P25, 4P35).
5. Remove 9 screws and then remove P4-Board.



9.64. Removal of P6-Board

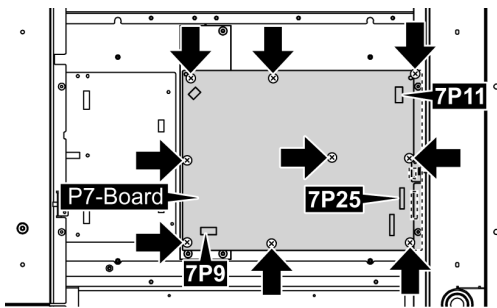
1. Remove the Fan Block R.
(Refer to Removal of Fan)
2. Disconnect the connectors (6P6, 6P9, 6P11, 6P25, 6P35).
3. Remove 9 screws and then remove P6-Board.



9.65. Removal of P7-Board

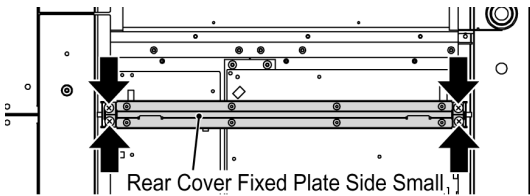
1. Remove the Fan Block R and S.
(Refer to Removal of Fan)
2. Disconnect the connectors (7P9, 7P11, 7P25).

3. Remove 9 screws and then remove P7-Board.

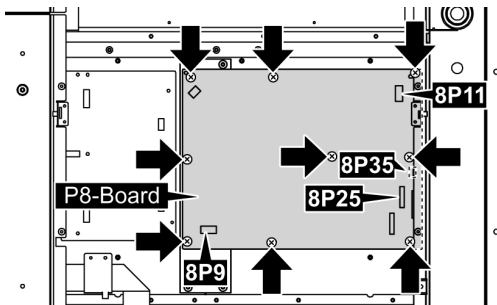


9.66. Removal of P8-Board

1. Remove the Fan Block S and T.
(Refer to Removal of Fan)
2. Remove 4 screws and then remove Rear Cover Fixed Plate Side Small.

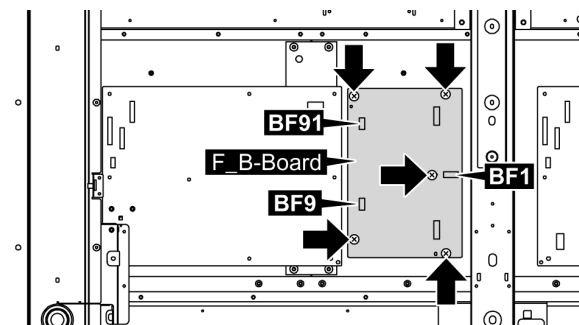


3. Disconnect the connectors (8P9, 8P11, 8P25, 8P35).
4. Remove 9 screws and then remove P8-Board.



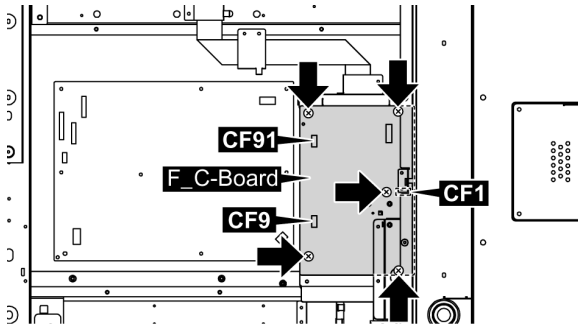
9.67. Removal of F_B-Board

1. Remove the Fan Block F and G.
(Refer to Removal of Fan)
2. Remove the Eye Bolt (M20) ,M16 Nut Cover and Rear Cover Fixed Plate (Upper Small).
(Refer to Removal of CC(C3)-Board)
3. Remove the Rear Cover Fixed Plate Side Large.
(Refer to Removal of P2-Board)
4. Disconnect the connectors (BF1, BF9, BF91).
5. Remove 5 screws and then remove F_B-Board.



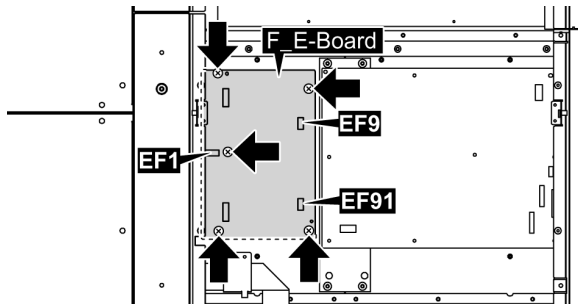
9.68. Removal of F_C-Board

1. Remove the Fan Block G and K.
(Refer to Removal of Fan)
2. Remove the Eye Bolt (M20) ,M16 Nut Cover and Rear Cover Fixed Plate (Upper Small).
(Refer to Removal of CC(C3)-Board)
3. Remove the Rear Cover Fixed Plate Side Large.
(Refer to Removal of P2-Board)
4. Disconnect the connectors (CF1, CF9, CF91).
5. Remove 5 screws and then remove F_C-Board.



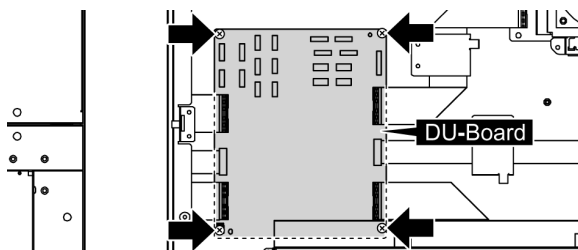
9.69. Removal of F_E-Board

1. Remove the Fan Block S and T.
(Refer to Removal of Fan)
2. Remove the Rear Cover Fixed Plate Side Small.
(Refer to Removal of P8-Board)
3. Disconnect the connectors (EF1, EF9, EF91).
4. Remove 5 screws and then remove F_E-Board.

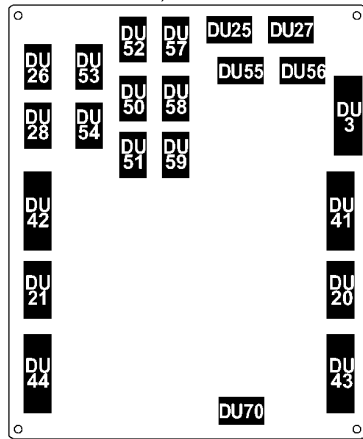


9.70. Removal of DU-Board

1. Remove the Fan Block L.
(Refer to Removal of Fan)
2. Disconnect the connectors (DU3, DU25, DU26, DU27, DU28, DU50, DU51, DU52, DU53, DU54, DU55, DU56, DU57, DU58, DU59, DU70).
3. Remove the flexible cables from the connectors (DU20, DU21, DU41, DU42, DU43, DU44).
4. Remove 4 screws and then remove DU-Board.

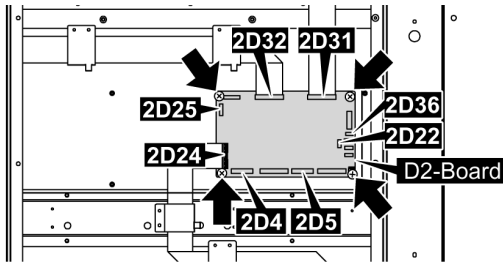


(DU-Board Detailed View)



9.71. Removal of D2(D_AB)-Board

1. Remove the Fan Block J.
(Refer to Removal of Fan)
2. Disconnect the connectors (2D4, 2D5, 2D22, 2D25, 2D36).
3. Remove the flexible cables from the connectors (2D24, 2D31, 2D32).
4. Remove 4 screws and then remove D2(D_AB)-Board.

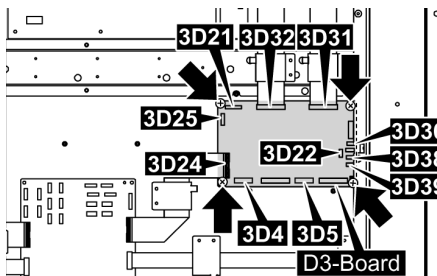


Note:

Check and set to the same software version of D1, D2, D3, D4-Board after D2-Board exchange.

9.72. Removal of D3(D_nill)-Board

1. Remove the Fan Block N.
(Refer to Removal of Fan)
2. Disconnect the connectors (3D4, 3D5, 3D21, 3D22, 3D25, 3D36, 3D38, 3D39).
3. Remove the flexible cables from the connectors (3D24, 3D31, 3D32).
4. Remove 4 screws and then remove D3(D_nill)-Board.

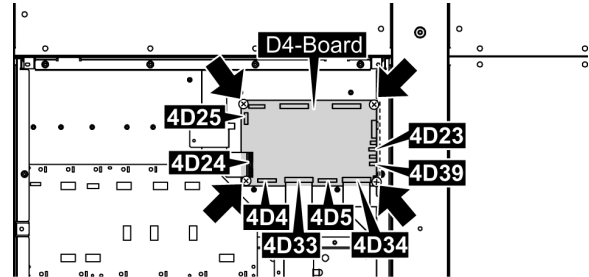


Note:

Check and set to the same software version of D1, D2, D3, D4-Board after D3-Board exchange.

9.73. Removal of D4(D_AC)-Board

1. Remove the Fan Block P.
(Refer to Removal of Fan)
2. Disconnect the connectors (4D4, 4D5, 4D23, 4D25, 4D39).
3. Remove the flexible cables from the connectors (4D24, 4D33, 4D34).
4. Remove 4 screws and then remove D4(D_AC)-Board.

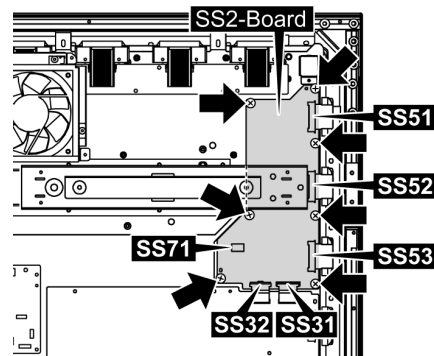


Note:

Check and set to the same software version of D1, D2, D3, D4-Board after D4-Board exchange.

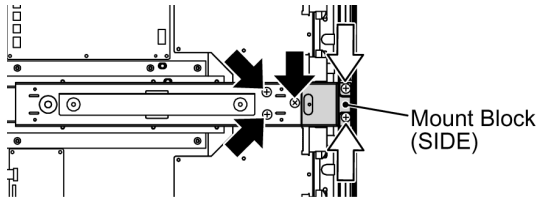
9.74. Removal of SS2-Board

1. Remove the Fan Block V and W.
(Refer to Removal of Fan)
2. Remove 3 screws (↑).
3. Remove 2 screws (⇧) and then slide the Mount Block (SIDE) the right side.
4. Disconnect the connectors (SS31, SS32, SS71).
5. Remove the flexible cables from the connectors (SS51, SS52, SS53).
6. Remove 7 screws and then remove SS2-Board.

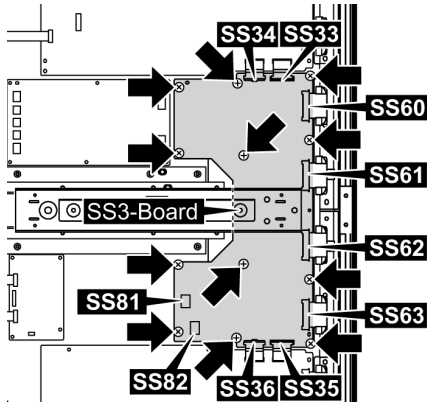


9.75. Removal of SS3-Board

1. Remove the Fan Block W and Z.
(Refer to Removal of Fan)
2. Remove 3 screws (↑).
3. Remove 2 screws (⇧) and then slide the Mount Block (SIDE) the right side.

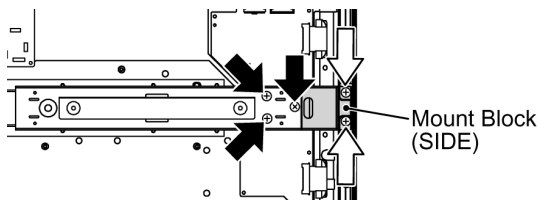


4. Remove the flexible cables from the connectors (SS33, SS34, SS35, SS36, SS81, SS82).
5. Disconnect the connectors (SS60, SS61, SS62, SS63).
6. Remove 12 screws and then remove SS3-Board.

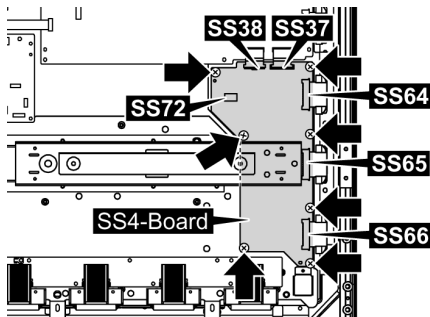


9.76. Removal of SS4-Board

1. Remove the Fan Block Z.
(Refer to Removal of Fan)
2. Remove 3 screws (↑).
3. Remove 2 screws (⇧) and then slide the Mount Block (SIDE) the right side.



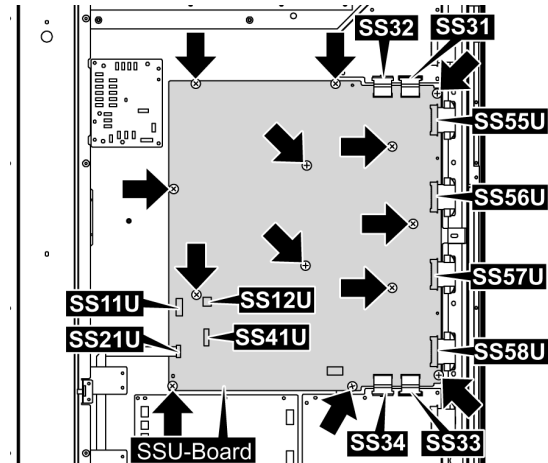
4. Disconnect the connectors (SS37, SS38, SS72).
5. Remove the flexible cables from the connectors (SS64, SS65, SS66).
6. Remove 7 screws and then remove SS4-Board.



9.77. Removal of SSU-Board

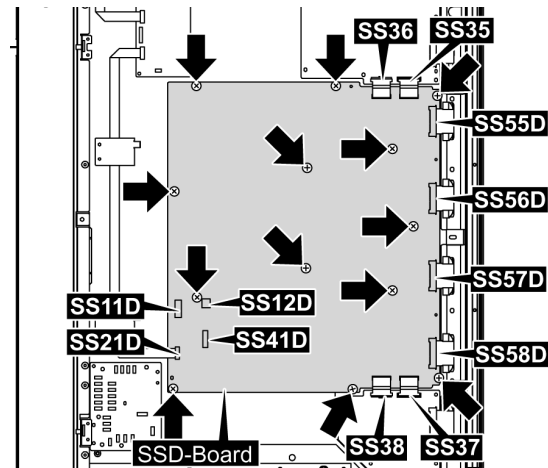
1. Remove the Fan Block W.
(Refer to Removal of Fan)
2. Disconnect the connectors (SS31, SS32, SS33, SS34, SS11U, SS12U, SS41U).

3. Remove the flexible cables from the connectors (SS21U, SS55U, SS56U, SS57U, SS58U).
4. Remove 13 screws and then remove SSU-Board.



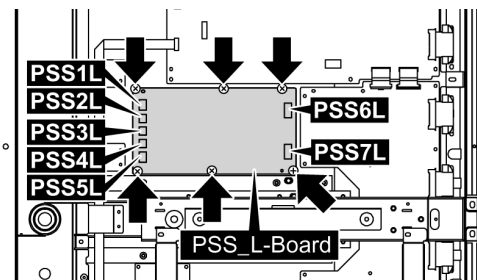
9.78. Removal of SSD-Board

1. Remove the Fan Block Z.
(Refer to Removal of Fan)
2. Disconnect the connectors (SS35, SS36, SS37, SS38, SS11D, SS12D, SS41D).
3. Remove the flexible cables from the connectors (SS21D, SS55D, SS56D, SS57D, SS58D).
4. Remove 13 screws and then remove SSD-Board.



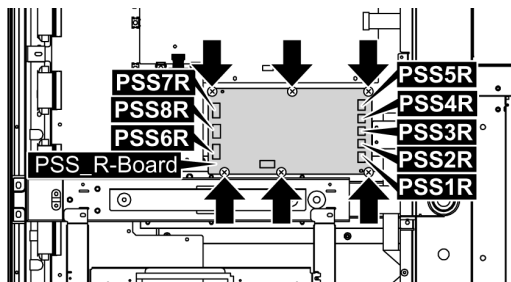
9.79. Removal of PSS_L-Board

1. Remove the Fan Block W.
(Refer to Removal of Fan)
2. Disconnect the connectors (PSS1L, PSS2L, PSS3L, PSS4L, PSS5L, PSS6L, PSS7L).
3. Remove 6 screws and then remove PSS_L-Board.



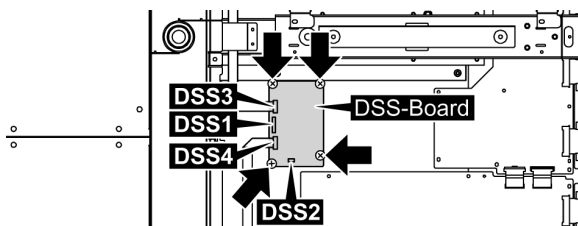
9.80. Removal of PSS_R-Board

1. Remove the Fan Block C.
(Refer to Removal of Fan)
2. Disconnect the connectors (PSS1R, PSS2R, PSS3R, PSS4R, PSS5R, PSS6R, PSS7R, PSS8R).
3. Remove 6 screws and then remove PSS_R-Board.



9.81. Removal of DSS-Board

1. Remove the Fan Block Z.
(Refer to Removal of Fan)
2. Disconnect the connectors (DSS1, DSS2).
3. Remove the flexible cables from the connectors (DSS3, DSS4).
4. Remove 4 screws and then remove DSS-Board.



10 Measurements and Adjustments

10.1. Adjustment Procedure

10.1.1. Driver Set-up (VSUS)

10.1.1.1. Item / Preparation

- Set the black pattern .

(4K FRONT END is installed)

1. Set 4K TEST Pattern by IIC mode.
2. Select the black pattern.

(4K FRONT END is not installed)

1. Remove the Rear Cover .(T.R. Inside/T.R. Outside/
T.L. Inside/T.L. Outside/B.L. Inside/B.L. Outside/Sub)
2. Disconnect the connectors .
(P35,1P35, 3P35,4P35,5P35,6P35,8P35,9P35).

10.1.1.2. Adjustments

Adjust driver section voltages. (Refer to the panel data on the Panel Label).

Check or adjust the following voltages with the multimeter.

Name	Test Point	Voltage	Volume	Remarks
Vsus (SC side)	connector PSS1-5(PSS) (SC SIDE)	Vsus $\pm$ 2V	VR251 (P,P1-P4)	*
Vsus (SS side)	connector PSS1-5(PSS) (SS SIDE)	Vsus $\pm$ 2V	VR251 (P5-P9)	*

*See the Panel Label.

Adjustment of VSUS voltage

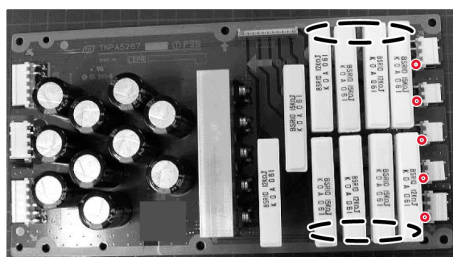
P2, P7 : VSUS voltage $\pm$ 0.2V

P2, P7 else : VSUS voltage +1V $\pm$ 0.2V

VSUS adjustment corresponding tables of adjusting test point and P-board

Adjusting point : between No1 pin of connectors PSS1-5 (Red circle of the picture) and GND (Pins of resistor)

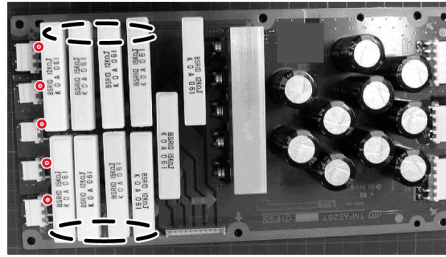
PSS(SC)-board



PSS(SC side)	
connector	P-board
PSS5	P2
PSS4	P4
PSS3	P3
PSS2	P1
PSS1	Pm

PSS(SS side)	
connector	P-board
PSS1	P7
PSS2	P5
PSS3	P6
PSS4	P9
PSS5	P8

PSS(SS)-board



10.1.2. Driver Set-up (OTHER)

10.1.2.1. Item / Preparation

1. Set Aging pattern (white pattern signal) by IIC mode.
2. Set the picture controls as follows.

Picture menu: Standard

Picture: +25

Aspect: Full

Caution

1. First perform Vsus adjustment.
2. Confirmation of Vscn voltage should be performed after confirmation of Vad adjustment.

When Vad=-135V, Voltage of Vscn is +10V $\pm$ 4V.

10.1.2.2. Adjustments

Adjust driver section voltages. (Refer to the panel data on the Panel Label).

Check or adjust the following voltages with the multimeter.

Name	Test Point	Voltage	Volume	Remarks
Ve	TPVE (SS3)	Ve $\pm$ 1V	VR15221 (SS3)	*
Vda	TP9 (P,P1,P3,P4)	66V+1V,-2V	Fixed	
	TP9 (P5,P6, P8,P9)	66V+1V,-2V	Fixed	
Vad	TPVAD (PSC)	-135V $\pm$ 1V	VR1250 (PSC)	
Vscn	TPVSCN (PSC)	Vad_base: +145V $\pm$ 4V GND_base: +10V $\pm$ 6V	Fixed	

*See the Panel Label.

Panel Label information

Panasonic

MC 2010

Vsus P2,P7: V

Vsus Other : V ← Adjustment voltage

Ve : V

MADE IN JAPAN TQF

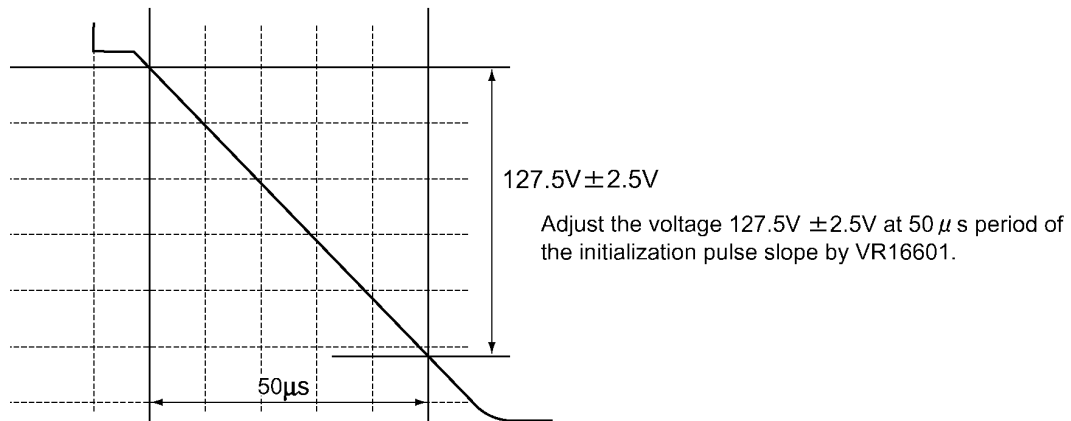
Panel Label is posted between P5 and DU board.

10.1.3. Initialization Pulse Adjust

1. Set Aging pattern (white pattern signal) by IIC mode.
2. Set the picture controls as follows.
Picture menu: Standard
Picture: +25
Aspect: Full
3. Connect Oscilloscope to TP801 and adjust VR16601 for $127.5V \pm 2.5V$.

Test Point	Volume	Level
TP801 (SU3)	VR16601 (SCU)	$127.5V \pm 2.5V$ at 50 μs period on the down slope.

TP801



10.1.4. P.C.B. (Print Circuit Board) exchange

10.1.4.1. Quick adjustment after P.C.B. exchange

1. To remove P.C.B., use the discharge jig and wait for discharge from electrolysis capacitors after power was off.

10.1.4.2. Quick adjustment after P.C.B. exchange

Adjust the following voltages with the multimeter.

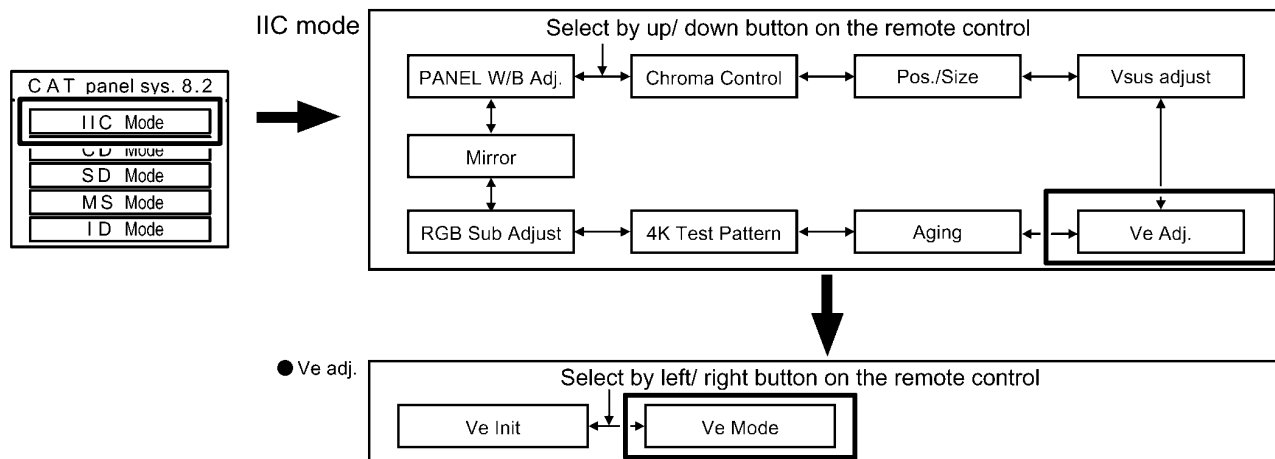
P.C.B.	Name	Test Point	Voltage	Volume	Remarks
P Board (SC side)	Vsus	connector PSS9 (PSS) (SC side)	Vsus $\pm$ 2V	VR251 (P, P1-P4)	*
	Vda	TP9 (P, P1-P4)	66V +1V, -2V	Fixed	
P Board (SS side)	Vsus	connector PSS9 (PSS) (SS side)	Vsus $\pm$ 2V	VR251 (P5-P9)	*
	Vda	TP9 (P5-P9)	66V +1V, -2V	Fixed	
SC (SCU/SCD) Board	Vad	TPVAD (PSC)	-135V $\pm$ 1V	VR1250 (PSC)	
	Vscn	TPVSCN (PSC)	Vad_base: +145V $\pm$ 4V GND_base: +10V $\pm$ 6V	Fixed	
SS (SSU/SSD) Board	Ve**	TPVE (SS3)	Ve $\pm$ 1V	VR15221 (SS3)	*
D, A Board	White balance and Sub brightness for NTSC, PAL, HD, PC and 625i signals				
A Board	Set Market Select Number to correct destination by MS mode. (See chap. 6.1.4)				
D, A Board	Set Ve Mode until bright points disappears by IIC mode.				

*See the Panel Label.

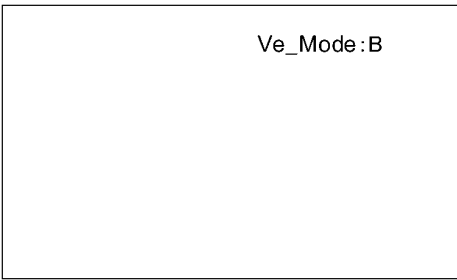
**See chap. 10.1.5.

10.1.5. Ve adjustment

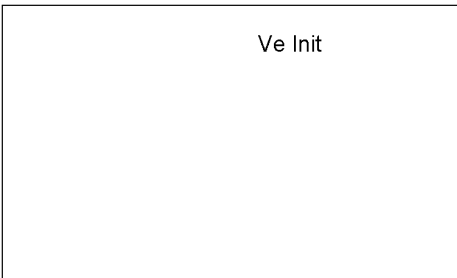
1. After exchange SSU,SSD or SS3 board, connect the multimeter to the testpoint TPVE(SS3).
2. Select Ve adj Mode by IIC mode. (See chap. 6.1.1., and 6.2.)



3. Set Ve Mode to B.



4. Press RETURN button and then select Ve Init.



5. Adjust Ve voltage at TPVE on SS3 Board by VR15221 on SS3 Board.
6. Exit the IIC mode.



10.2. Adjustment

10.2.1. RGB white balance adjustment

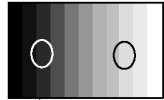
Instrument Name	Connect to	Setting												
• RGB VGA60 W / B pattern • Color analyzer (Minolta CA-100 or equivalent)	PC IN terminal Panel surface													
Steps	Remarks													
[Condition] • Make sure the front panel to be used on the final set is fitted. • Make sure a color signal is not being shown before adjustment. • Put the color analyzer where there is little color variation. [Adjustment] 1. Set COMPONENT / RGB-IN SELECT to RGB. 2. Select the IIC mode [PANEL W / B Adj.] item. 3. Check that the color temperature is [COOL (Hi)]. 4. Output a white balance pattern. 5. Touch the signal receiver of color analyzer to the highlight window's center. 6. Fix G drive at E0h and adjust B drive and R drive so x, y become the [Color temperature COOL (Hi)] in the below table. Adjust it again after it lowers of 08h data when the adjustment is NG. (In addition, adjust it after it lowers by 08h data for NG.) 7. Adjust R/G/B together by multiplication so the maximum drive value in R/G/B becomes FCh with the gain ratio kept. (ALL-DRIVE) 8. Set color temperature to [NORMAL (Mid)]. 9. Fix G drive at E0h and adjust B drive and R drive so the highlight window's x, y becomes the [Color temperature NORMAL (Mid)] in the below table. Adjust it again after it lowers of 08h data when the adjustment is NG. (In addition, adjust it after it lowers by 08h data for NG.) 10. Adjust R/G/B together by multiplication so the maximum drive value in R/G/B becomes FCh with the gain ratio kept. (ALL-DRIVE) 11. Set color temperature to [WARM (Low)]. 12. Set G drive to E0h and adjust B drive and R drive so the highlight window's x, y become the [Color temperature WARM (Low)] shown in the below table. Adjust it again after it lowers of 08h data when the adjustment is NG. (In addition, adjust it after it lowers by 08h data for NG.) 13. Adjust R/G/B together by multiplication so the maximum drive value in R/G/B becomes FCh with the gain ratio kept. (ALL-DRIVE) 14. Copy the R drive, G drive and B drive data in NTSC, PAL DVI region. Table 1 W/B adjustment values <table border="1"> <thead> <tr> <th>Color temperature</th><th>x</th><th>y</th></tr> </thead> <tbody> <tr> <td>COOL(Hi)</td><td>0.276</td><td>0.276</td></tr> <tr> <td>NORMAL(Mid)</td><td>0.288</td><td>0.296</td></tr> <tr> <td>WARM(Low)</td><td>0.313</td><td>0.329</td></tr> </tbody> </table> Adjustment target Hi-light: $x \pm 0.003$ $y \pm 0.003$ Hi-light is target of the number at drive adjustment in the hi-light windows. Therefore, it is not target of the hi-light number at after adjustment white balance.	Color temperature	x	y	COOL(Hi)	0.276	0.276	NORMAL(Mid)	0.288	0.296	WARM(Low)	0.313	0.329	Picture Menu: Standard User setting: Normal except PICTURE: max 30 Aspect: Full (16 : 9) Position and size: Normal • [7] key : color temperature select. • [9] key : Picture menu select. • Highlight section Signal amplitude 75% RGB VGA W/B Pattern  • Drive standard G: E0h	
Color temperature	x	y												
COOL(Hi)	0.276	0.276												
NORMAL(Mid)	0.288	0.296												
WARM(Low)	0.313	0.329												

Table 2 Drive data addresses (PC/RGB)

Color temperature	R	G	B
COOL(Hi)	A0-11AD	A0-11AE	A0-11AF
NORMAL(Mid)	A0-11B0	A0-11B1	A0-11B2
WARM(Low)	A0-11B3	A0-11B4	A0-11B5

Table 3 Drive data addresses (NTSC -- > nonuse, dummy)

Color temperature	R	G	B
COOL(Hi)	A0-1180	A0-1181	A0-1182
NORMAL(Mid)	A0-1183	A0-1184	A0-1185
WARM(Low)	A0-1186	A0-1187	A0-1188

Table 4 Drive data addresses (PAL -- > nonuse, dummy)

Color temperature	R	G	B
COOL(Hi)	A0-1189	A0-118A	A0-118B
NORMAL(Mid)	A0-118C	A0-118D	A0-118E
WARM(Low)	A0-118F	A0-1190	A0-1191

Table 5 Drive data addresses (DVI -- > nonuse, dummy)

Color temperature	R	G	B
COOL(Hi)	A0-11B6	A0-11B7	A0-11B8
NORMAL(Mid)	A0-11B9	A0-11BA	A0-11BB
WARM(Low)	A0-11BC	A0-11BD	A0-11BE

10.2.2. YUV white balance adjustment

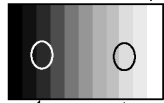
Instrument Name	Connect to	Setting												
- HD(1125/60i) W / B pattern (COMPONENT Output) - Color analyzer (Minolta CA-100 or equivalent)	PC IN terminal Panel surface													
Steps	Remarks													
[condition] - Make sure the front panel to be used on the final set is fitted. - Make sure a color signal is not being shown before adjustment. - Put the color analyzer where there is little color variation. [Adjustment] - Set COMPONENT / RGB-IN SELECT to COMPONENT. - Select the IIC mode [PANEL W / B Adj.] item. - Check that the color temperature is [COOL (Hi)]. - Output a white balance pattern. - Touch the signal receiver of color analyzer to the highlight window's center. - Fix G drive at E0h and adjust B drive and R drive so x, y become the [Color temperature COOL (Hi)] in the below table. Adjust it again after it lowers of 08h data when the adjustment is NG. (In addition, adjust it after it lowers by 08h data for NG.) - Adjust R/G/B together by multiplication so the maximum drive value in R/G/B becomes FCh with the gain ratio kept. (ALL-DRIVE) - Set color temperature to [NORMAL (Mid)]. - Fix G drive at E0h and adjust B drive and R drive so the highlight window's x, y becomes the [Color temperature NORMAL (Mid)] in the below table. Adjust it again after it lowers of 08h data when the adjustment is NG. (In addition, adjust it after it lowers by 08h data for NG.) - Adjust R/G/B together by multiplication so the maximum drive value in R/G/B becomes FCh with the gain ratio kept. (ALL-DRIVE) - Set color temperature to [WARM (Low)]. - Set G drive to E0h and adjust B drive and R drive so the highlight window's x, y become the [Color temperature WARM (Low)] shown in the below table. Adjust it again after it lowers of 08h data when the adjustment is NG.(In addition, adjust it after it lowers by 08h data for NG.) - Adjust R/G/B together by multiplication so the maximum drive value in R/G/B becomes FCh with the gain ratio kept. (ALL-DRIVE) - Copy the R drive, G drive and B drive data in YUV1_525ip, YUV3_625ip region. Table 6 W/B adjustment values <table border="1"> <thead> <tr> <th>Color temperature</th><th>x</th><th>y</th></tr> </thead> <tbody> <tr> <td>COOL(Hi)</td><td>0.276</td><td>0.276</td></tr> <tr> <td>NORMAL(Mid)</td><td>0.288</td><td>0.296</td></tr> <tr> <td>WARM(Low)</td><td>0.313</td><td>0.329</td></tr> </tbody> </table> Adjustment target Hi-light: $x \pm 0.003$ $y \pm 0.003$ Hi-light is target of the number at drive adjustment in the hi-light windows. Therefore, it is not target of the hi-light number at after adjustment white balance.	Color temperature	x	y	COOL(Hi)	0.276	0.276	NORMAL(Mid)	0.288	0.296	WARM(Low)	0.313	0.329	Picture Menu: STANDARD User setting: Normal except PICTURE: max 30 Aspect: Full (16 : 9) Position and size: Normal [7] key : color temperature select. [9] key : Picture menu select. - Highlight section Signal amplitude 75% HD W/B Pattern (COMPONENT Output)  High light 75% Low light 15% - Drive standard G: E0h	
Color temperature	x	y												
COOL(Hi)	0.276	0.276												
NORMAL(Mid)	0.288	0.296												
WARM(Low)	0.313	0.329												

Table 7 Drive data addresses (YUV2_HD)

Color temperature	R	G	B
COOL(Hi)	A0-119B	A0-119C	A0-119D
NORMAL(Mid)	A0-119E	A0-119F	A0-11A0
WARM(Low)	A0-11A1	A0-11A2	A0-11A3

Table 8 Drive data addresses (YUV1_525ip)

Color temperature	R	G	B
COOL(Hi)	A0-1192	A0-1193	A0-1194
NORMAL(Mid)	A0-1195	A0-1196	A0-1197
WARM(Low)	A0-1198	A0-1199	A0-119A

Table 9 Drive data addresses (YUV3_625ip)

Color temperature	R	G	B
COOL(Hi)	A0-11A4	A0-11A5	A0-11A6
NORMAL(Mid)	A0-11A7	A0-11A8	A0-11A9
WARM(Low)	A0-11AA	A0-11AB	A0-11AC

11 Block Diagram

11.1. Diagram Notes

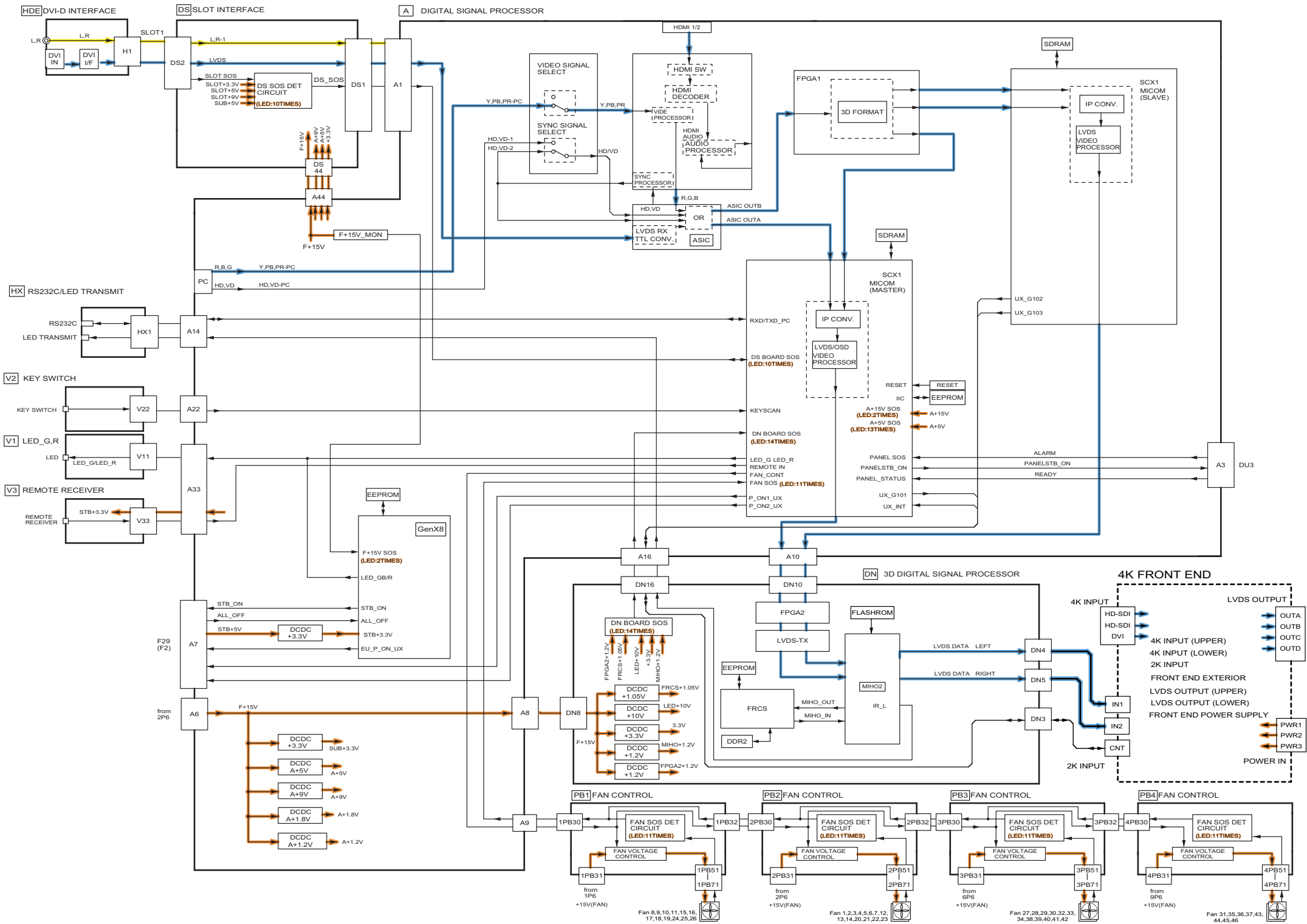
Notes:

- 1. **Resistor**
Unit of resistance is OHM [Ω] (K=1,000, M=1,000,000).
- 2. **Capacitor**
Unit of capacitance is μ F, unless otherwise noted.
- 3. Coil
Unit of inductance is H, unless otherwise noted.
- 4. Test Point
 : Test Point position
- 5. Earth Symbol
 : Chassis Earth (Cold)  : Line Earth (Hot)
- 6. Voltage Measurement
Voltage is measured by a DC voltmeter.
Conditions of the measurement are the following:
Power Source AC200-240V, 50/60Hz
Receiving Signal Color Bar signal (RF)
All customer's controls Maximum positions
- 7. When arrow mark () is found, connection is easily found from the direction of arrow.
- 8. Indicates the major signal flow. : Video  Audio 
- 9. This block diagram is the latest at the time of printing and subject to change without notice.

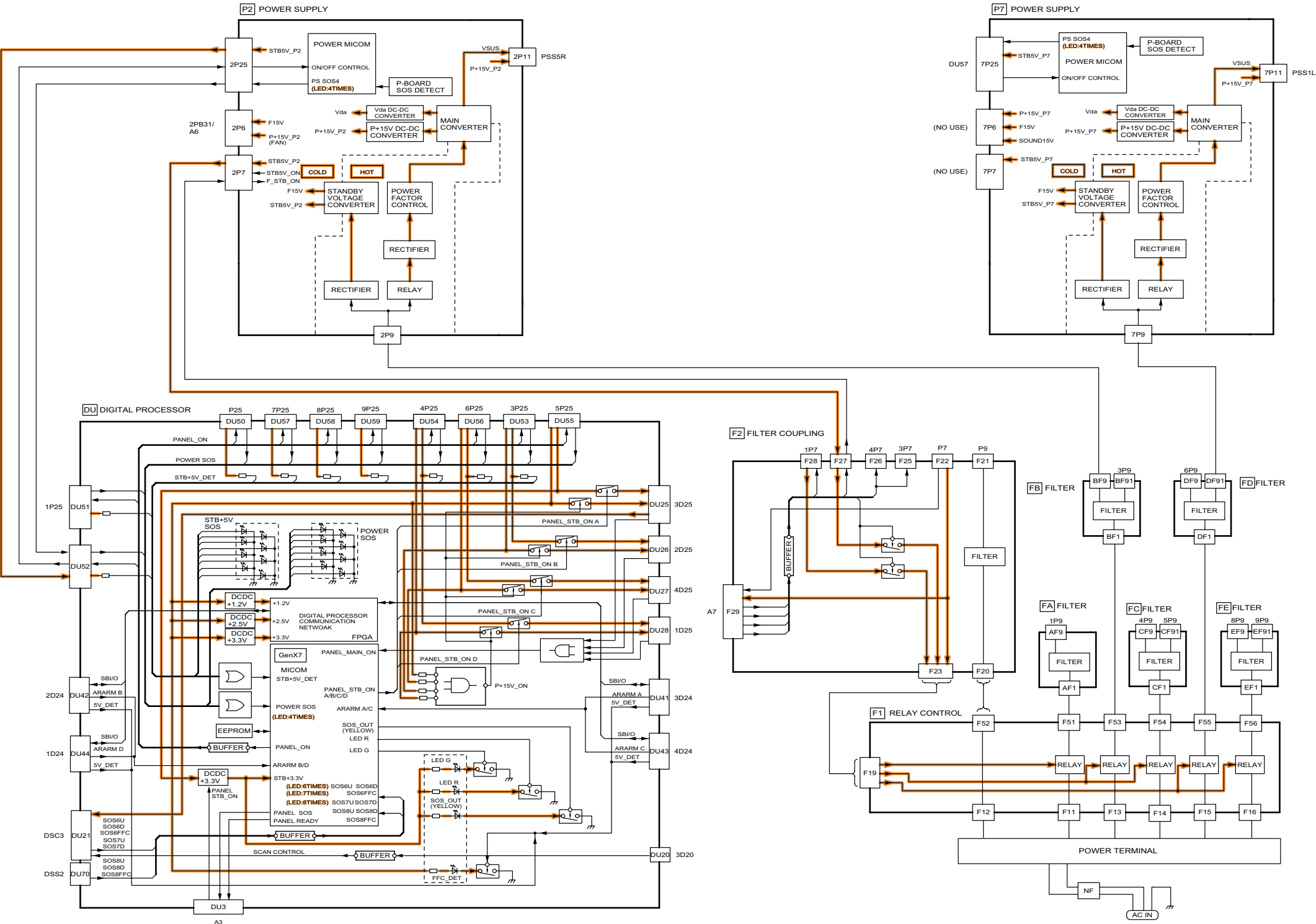
Remarks:

- 1. The Power Circuit contains a circuit area which uses a separate power supply to isolate the earth connection.
The circuit is defined by HOT and COLD indications in the block diagram. Take the following precautions.
All circuits, except the Power Circuit, are cold.
Precautions
 - a. Do not touch the hot part or the hot and cold parts at the same time or you may be shocked.
 - b. Do not short- circuit the hot and cold circuits or a fuse may blow and parts may break.
 - c. Do not connect an instrument, such as an oscilloscope, to the hot and cold circuits simultaneously or a fuse may blow.
Connect the earth of instruments to the earth connection of the circuit being measured.
 - d. Make sure to disconnect the power plug before removing the chassis.

11.2. Main Block (1 of 6) Diagram

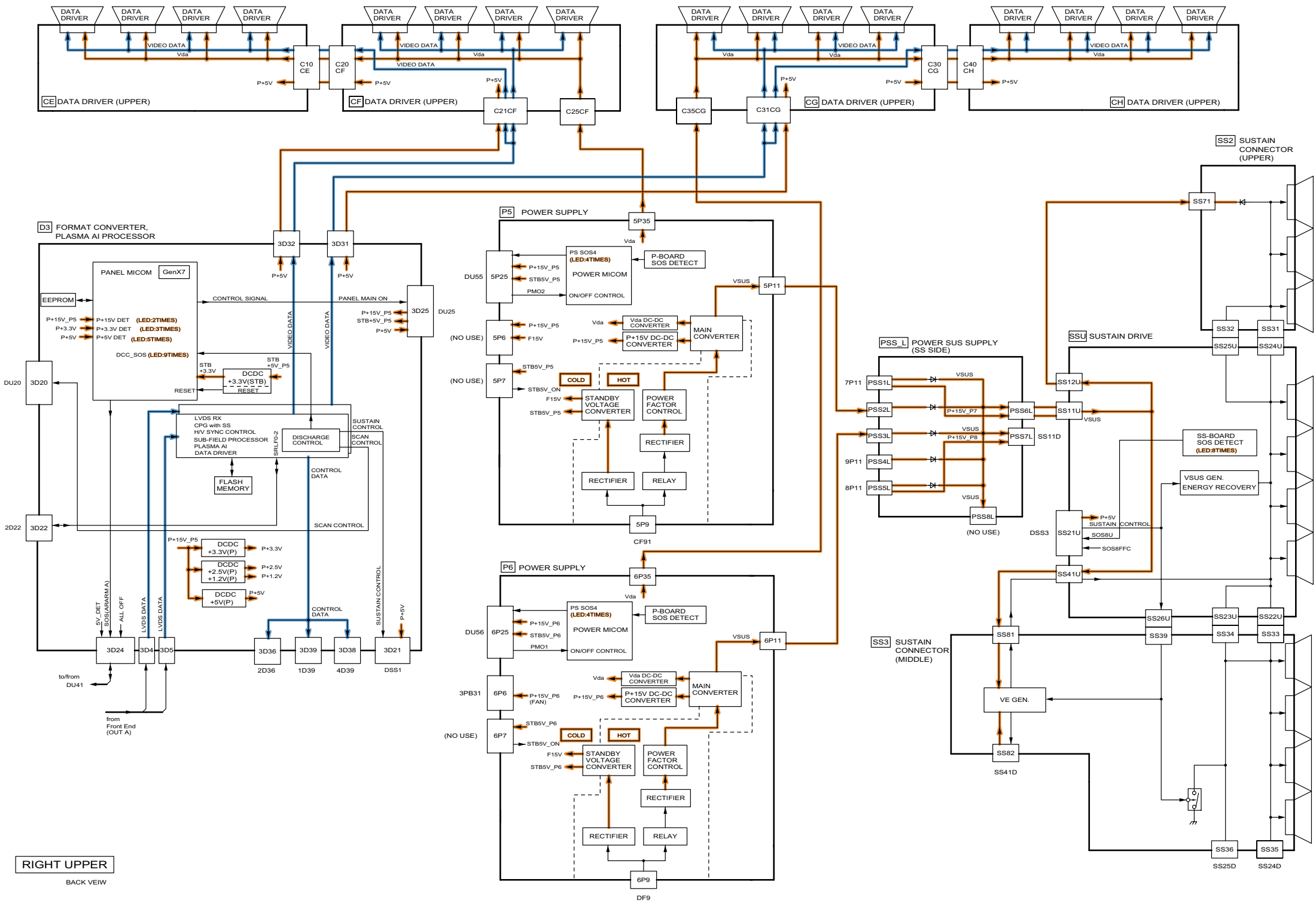


11.3. Main Block (2 of 6) Diagram

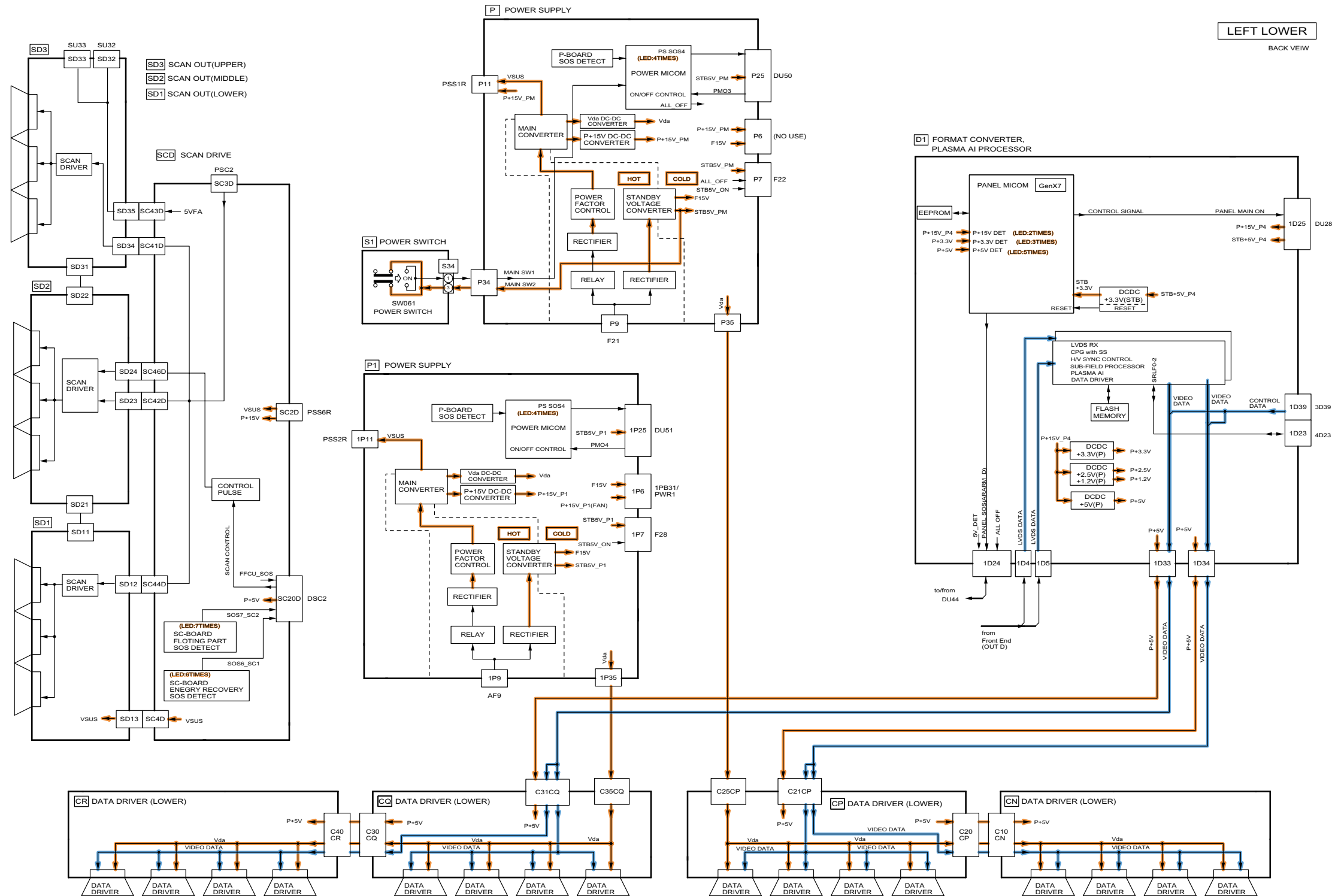




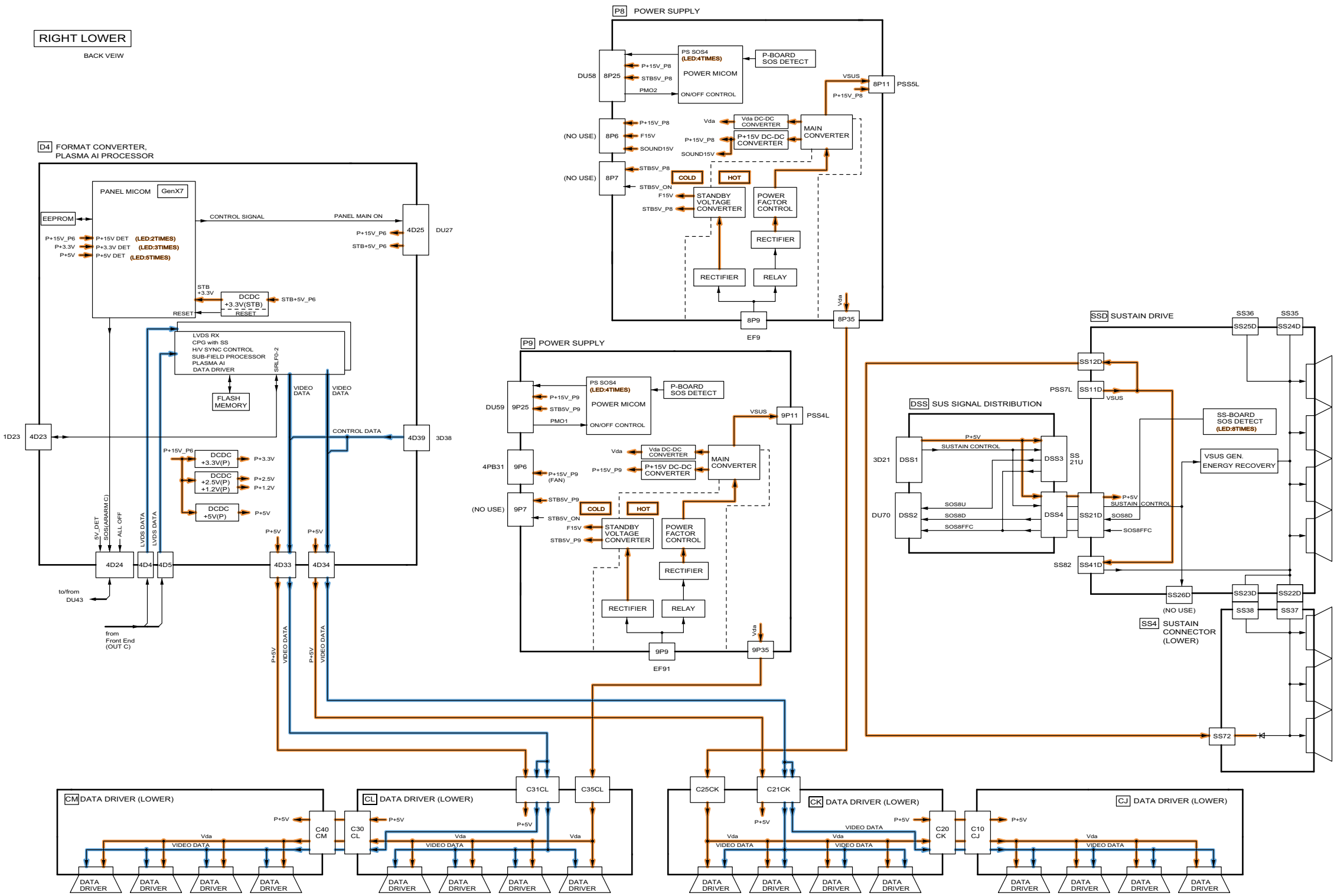
11.5. Main Block (4 of 6) Diagram



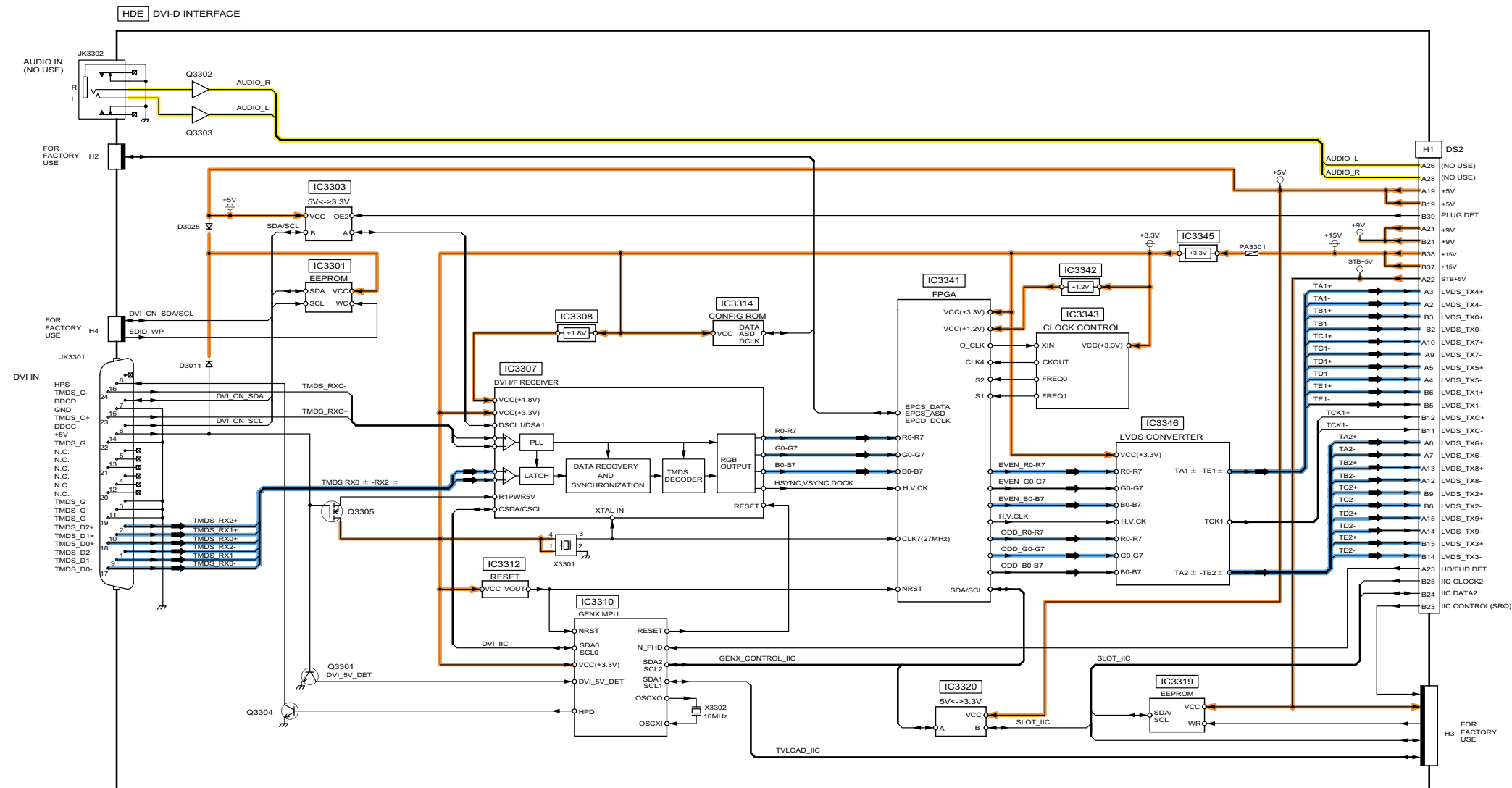
11.6. Main Block (5 of 6) Diagram



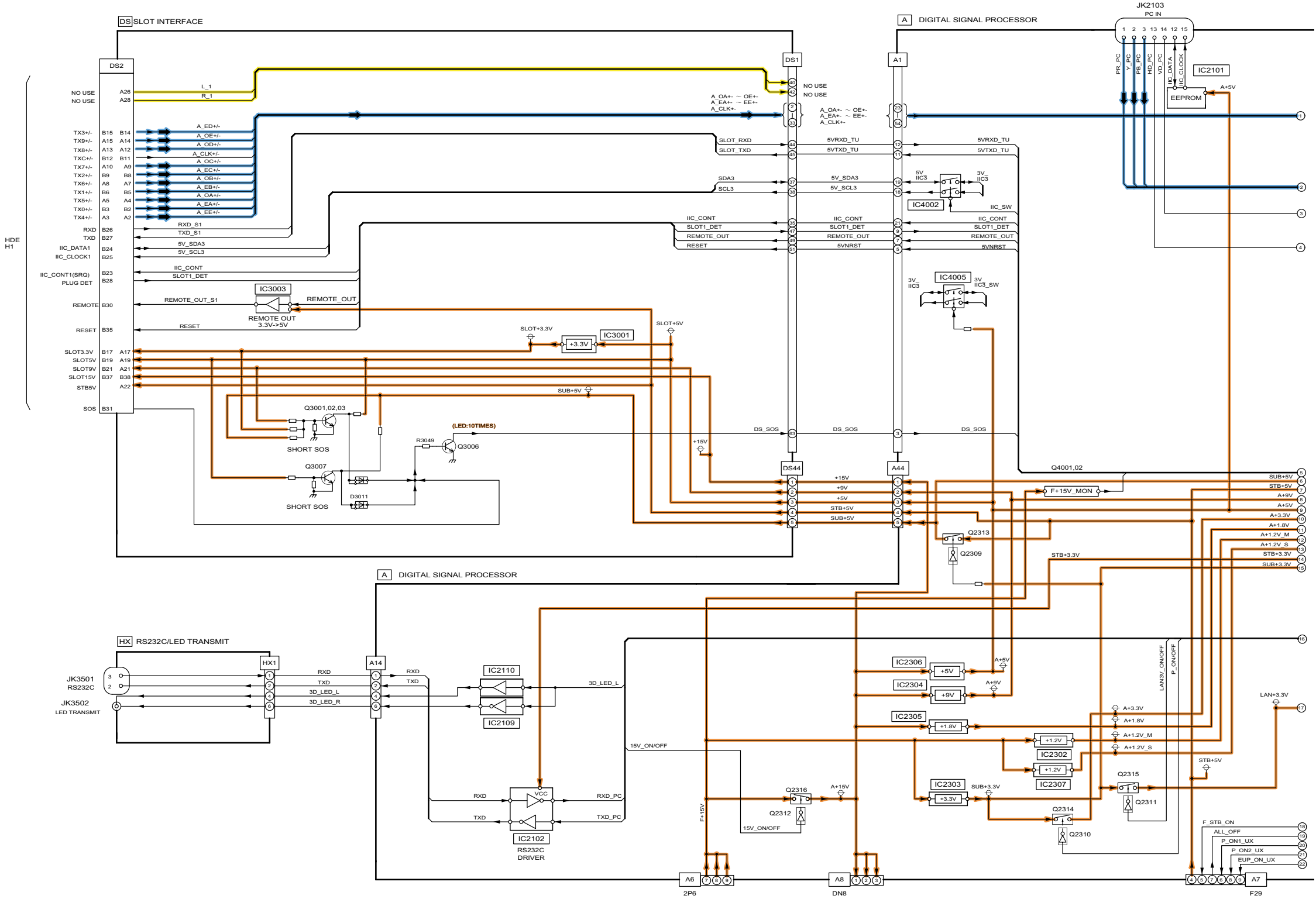
11.7. Main Block (6 of 6) Diagram



11.8. Block (1 of 23) Diagram



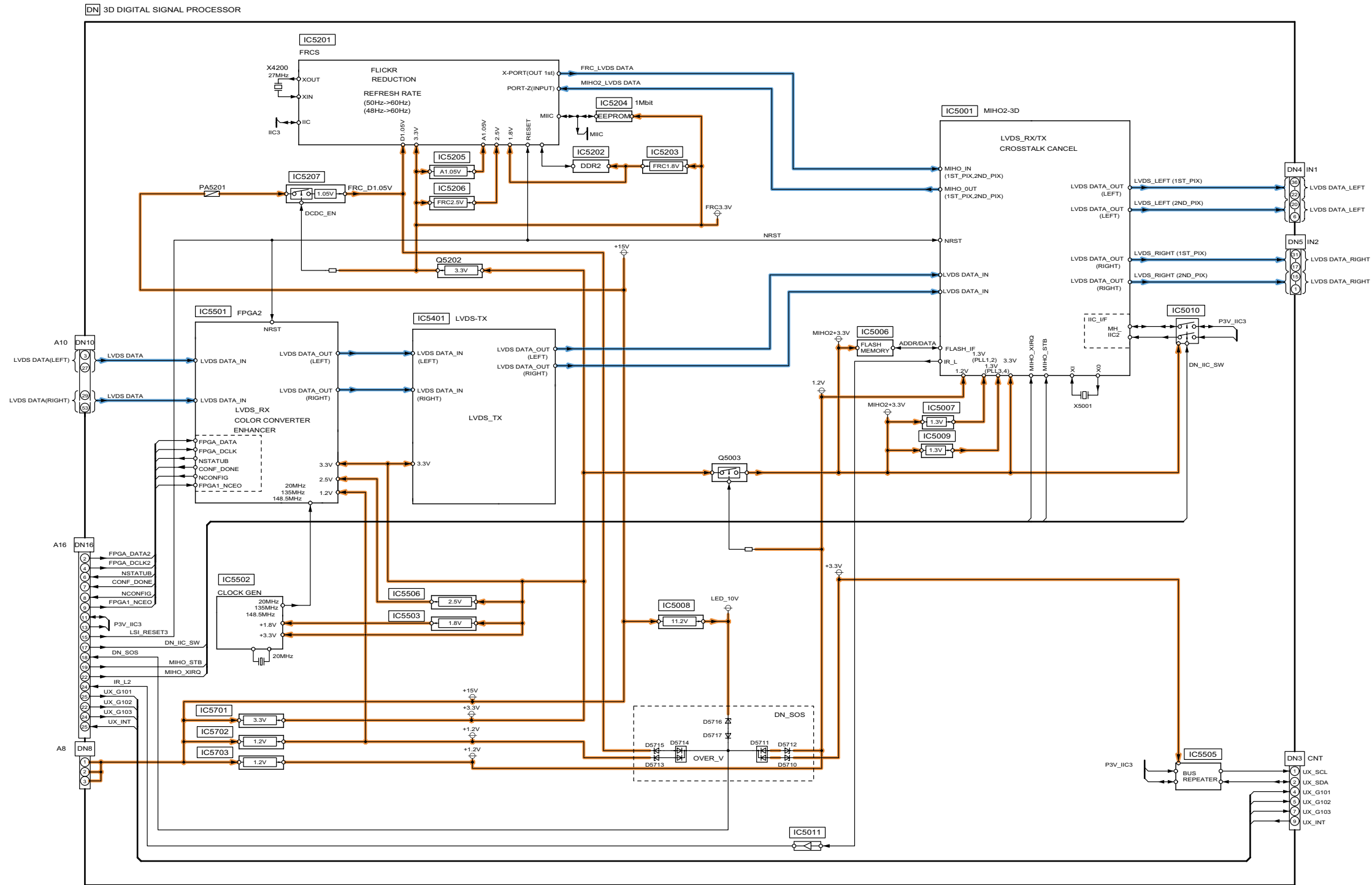
11.9. Block (2 of 23) Diagram



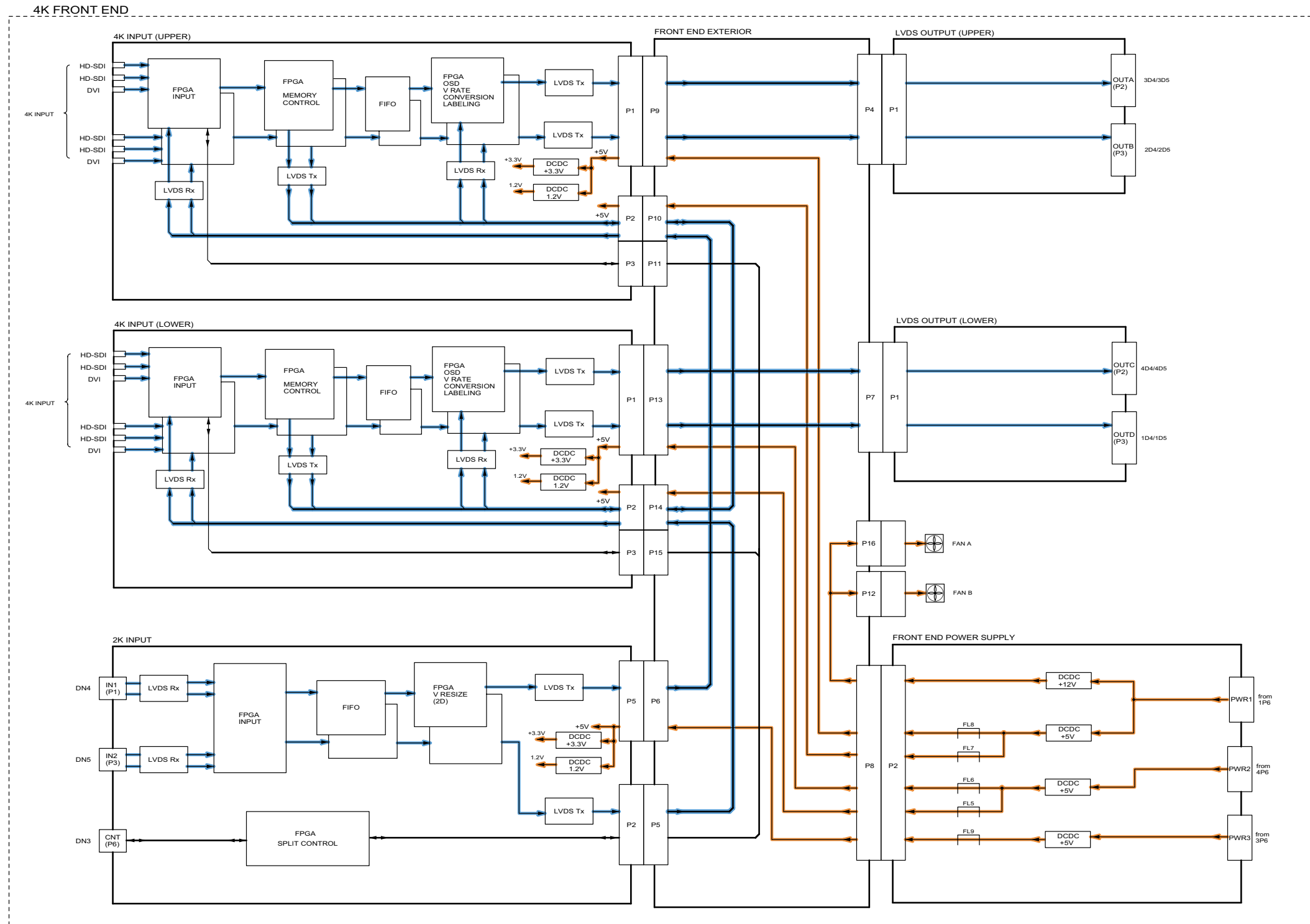




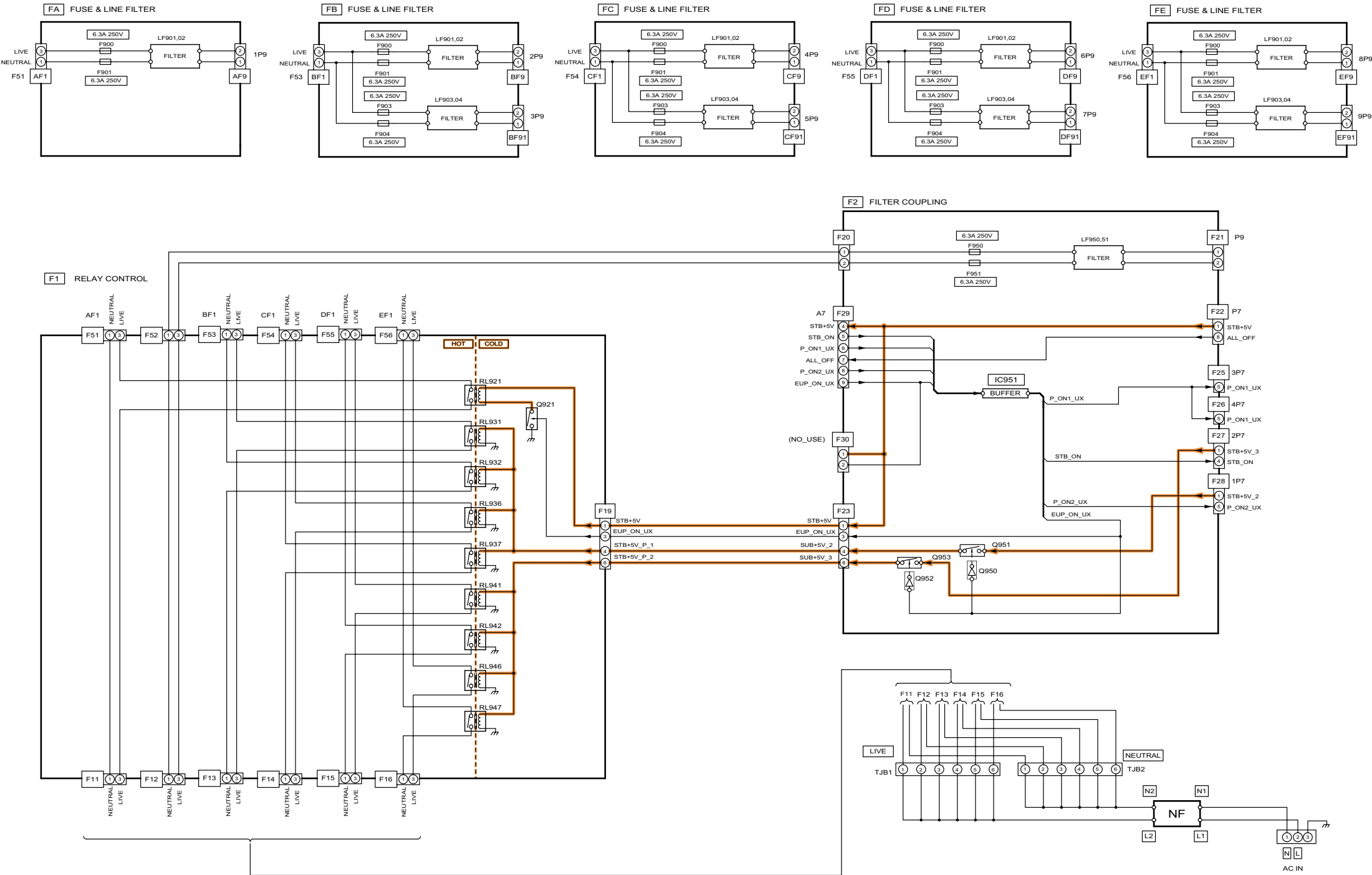
11.12. Block (5 of 23) Diagram

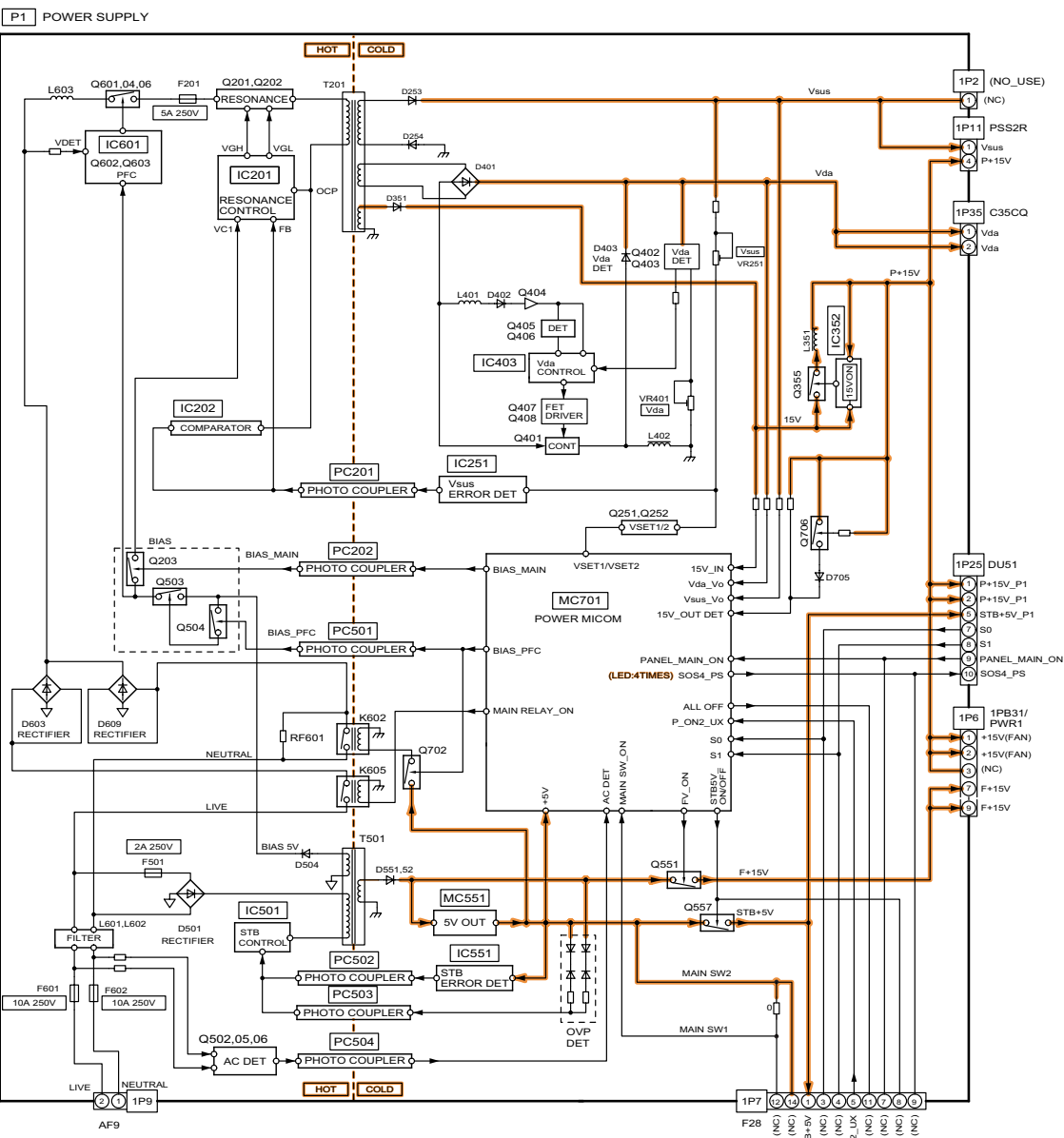


11.13. Block (6 of 23) Diagram

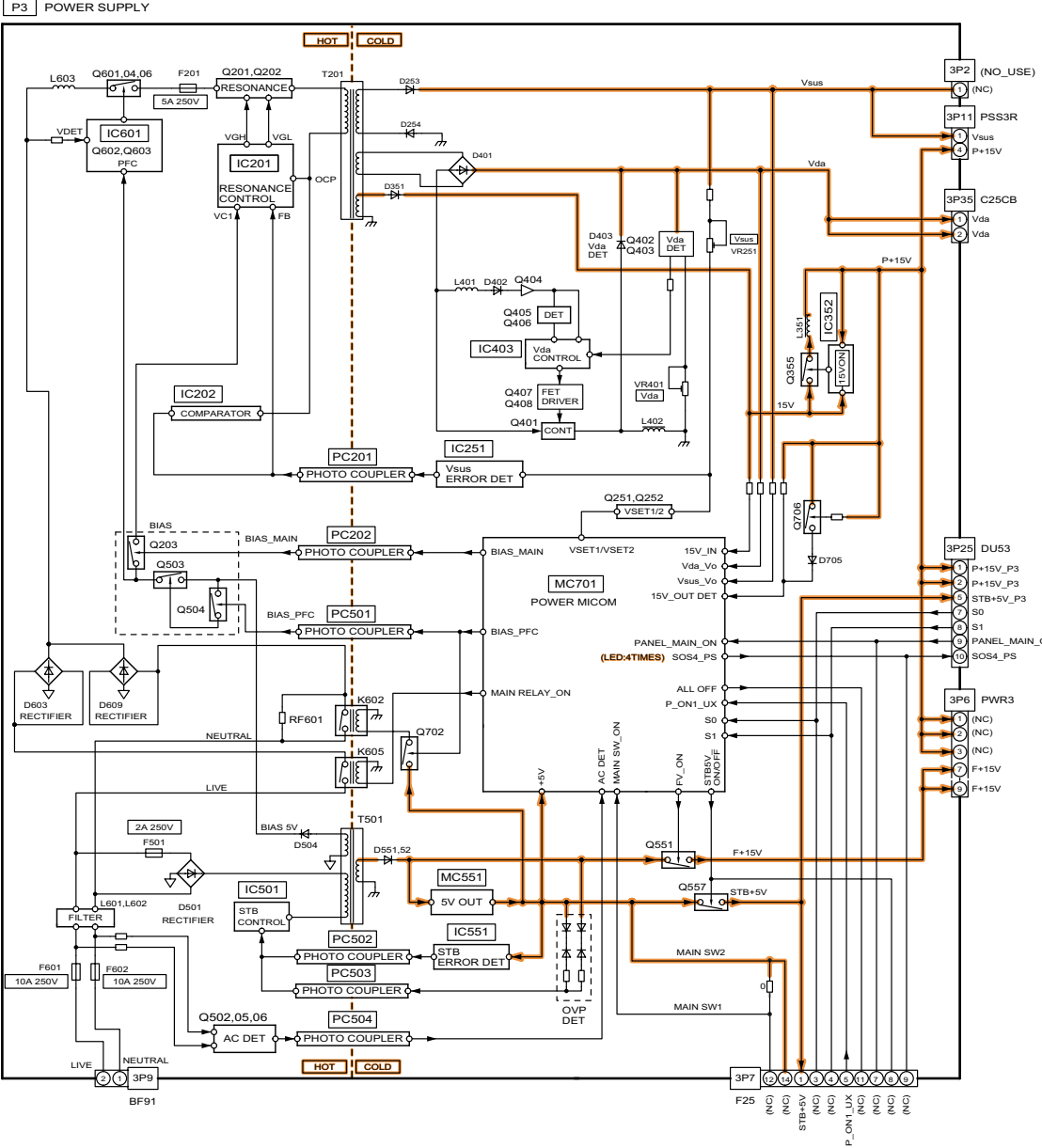
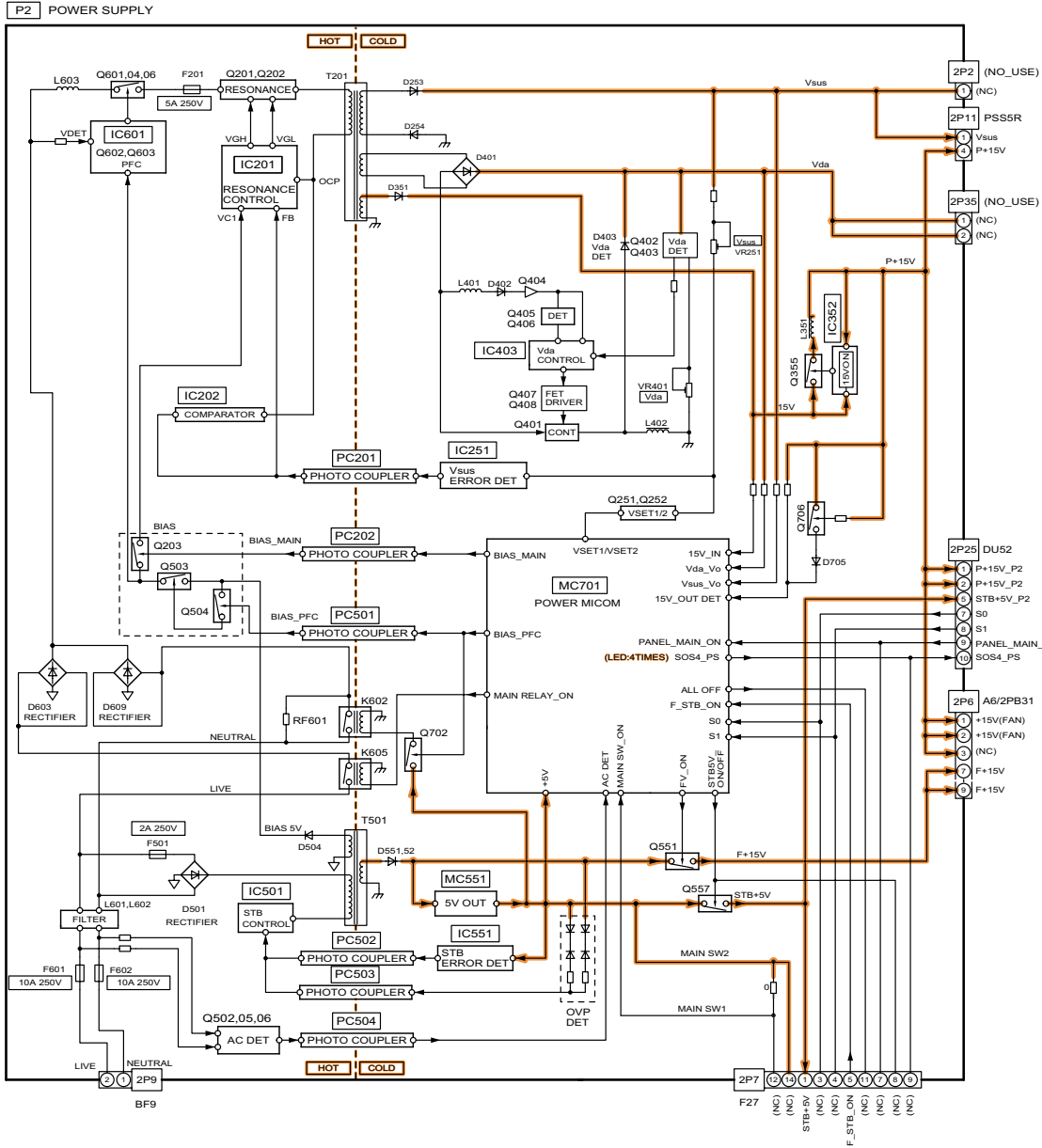


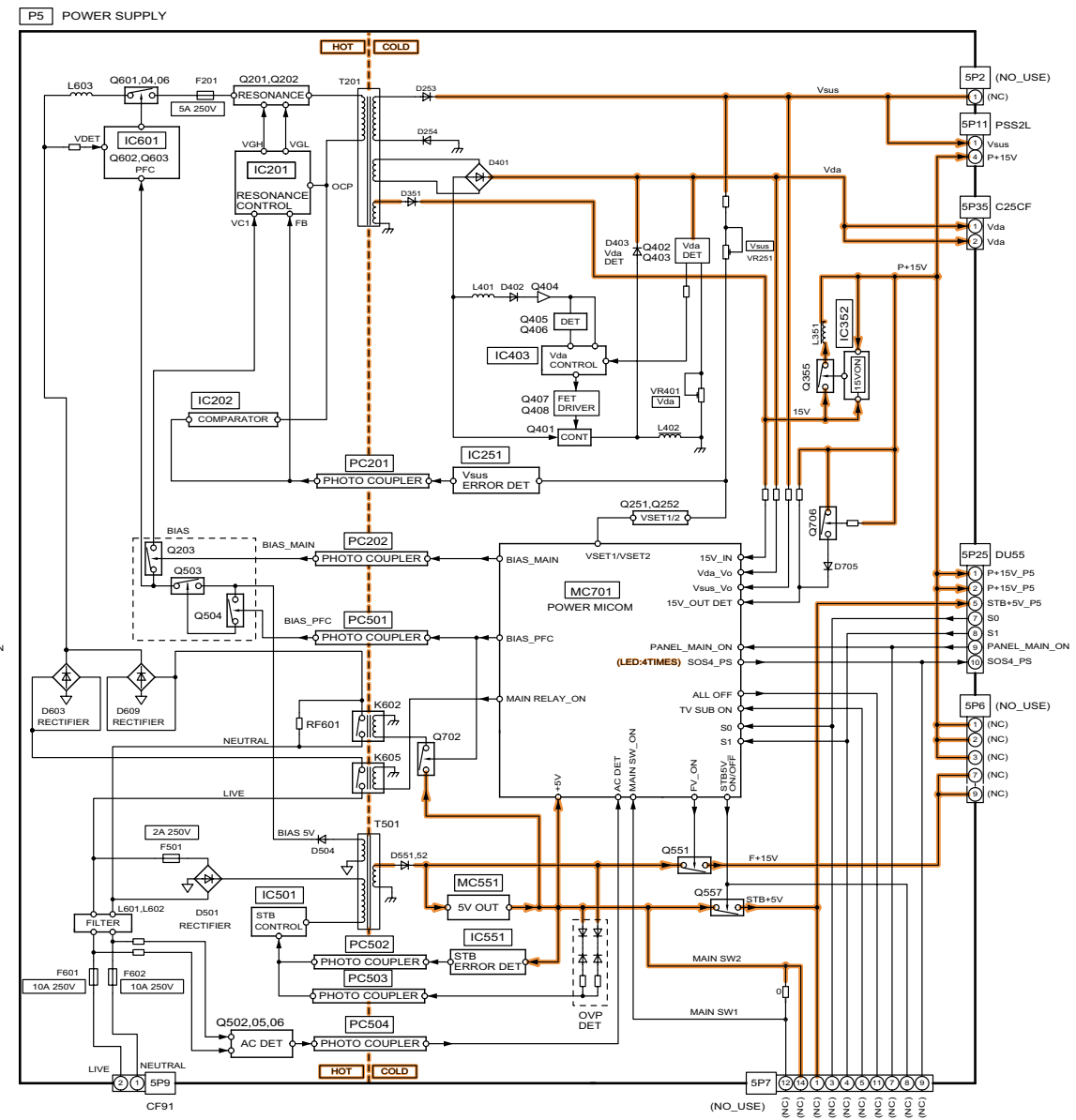
11.14. Block (7 of 23) Diagram

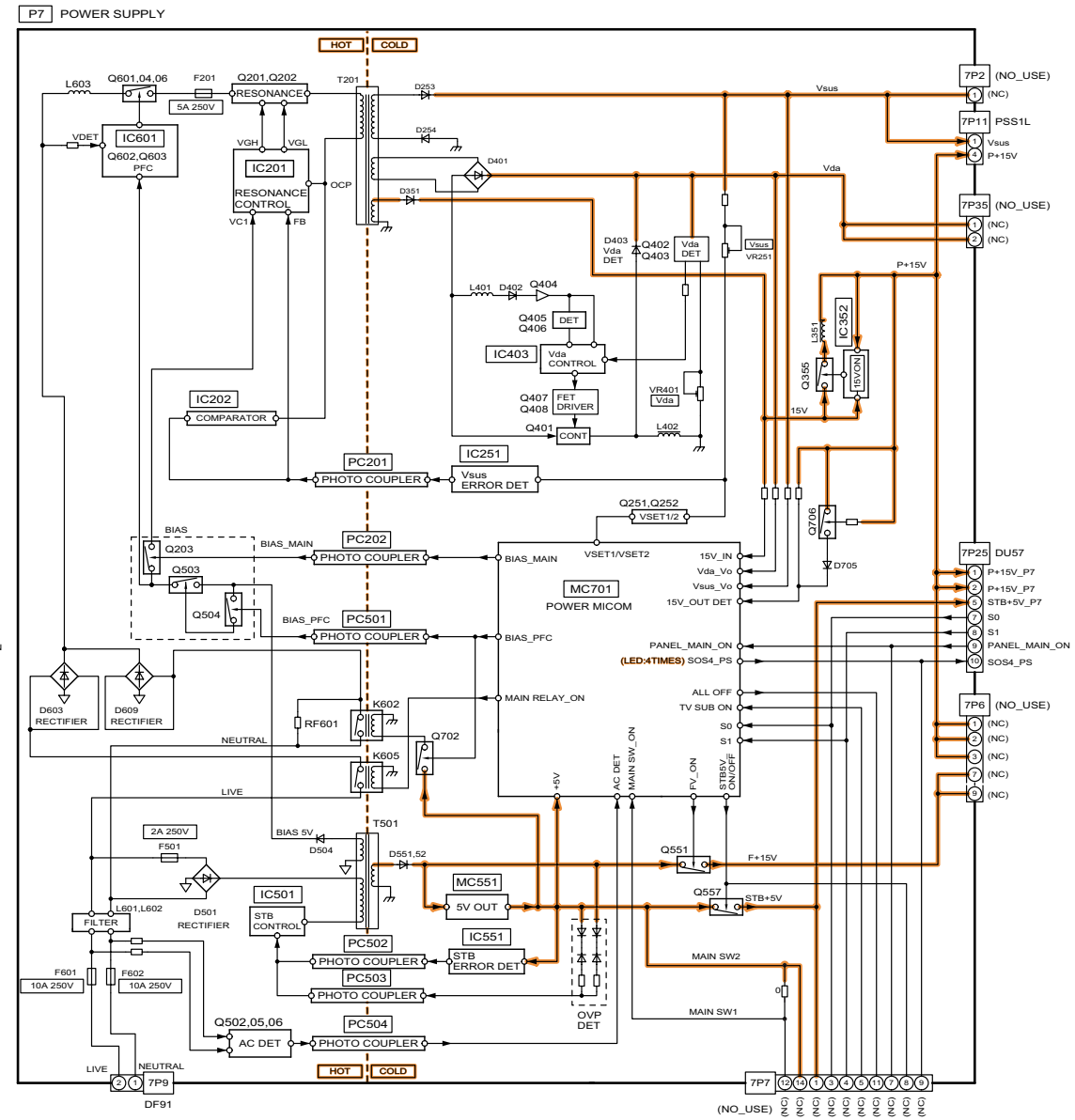


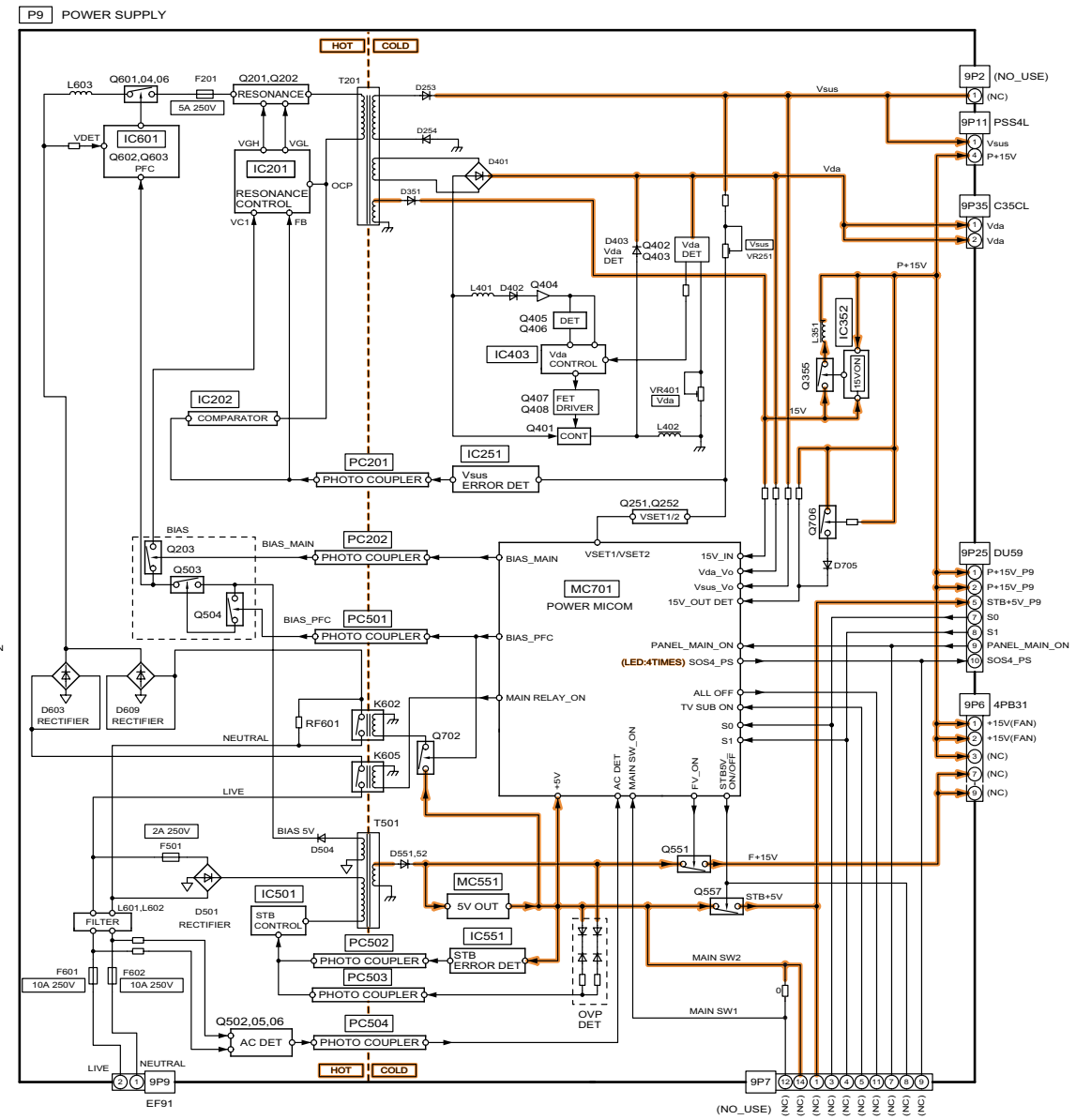


11.16. Block (9 of 23) Diagram



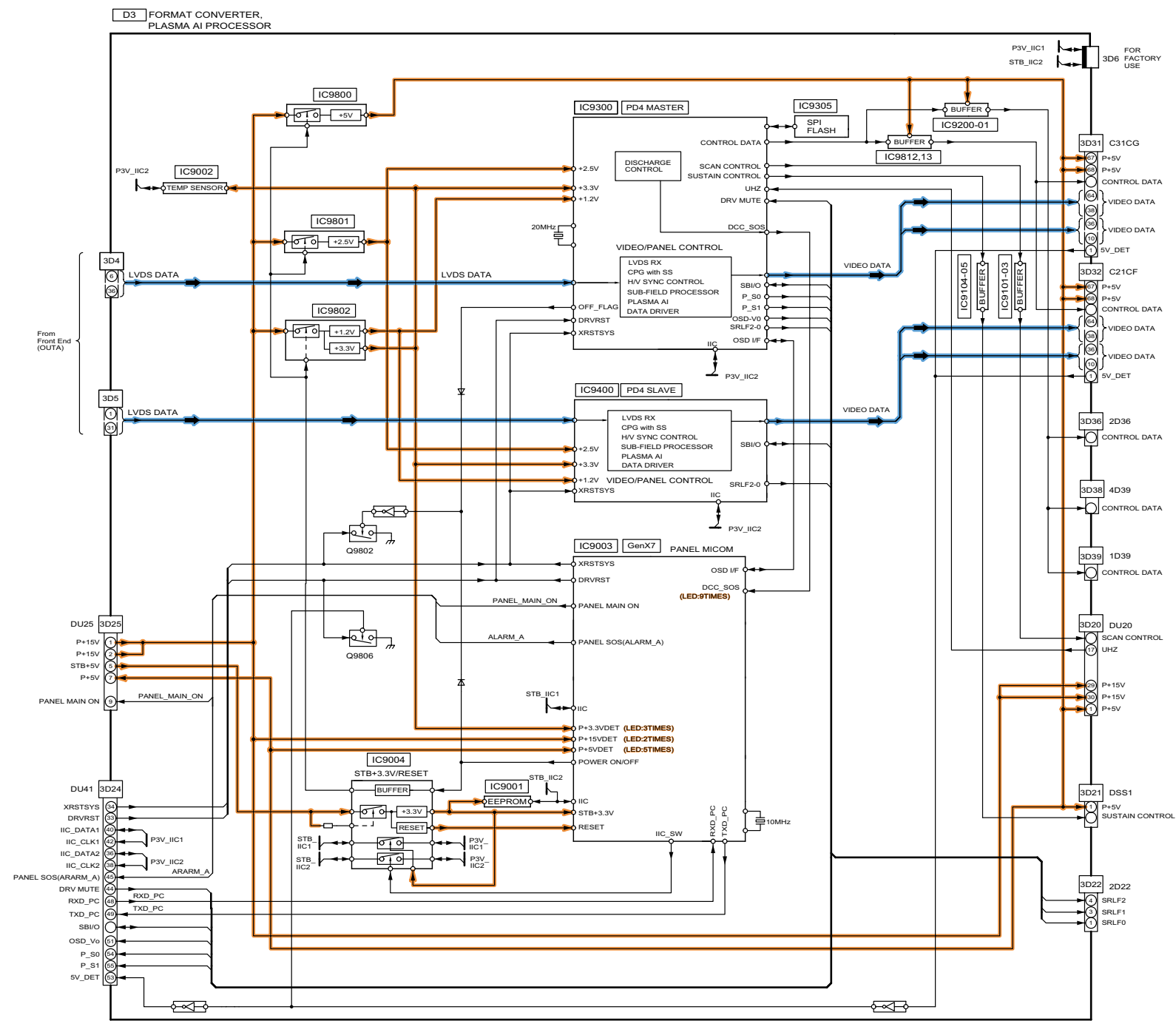






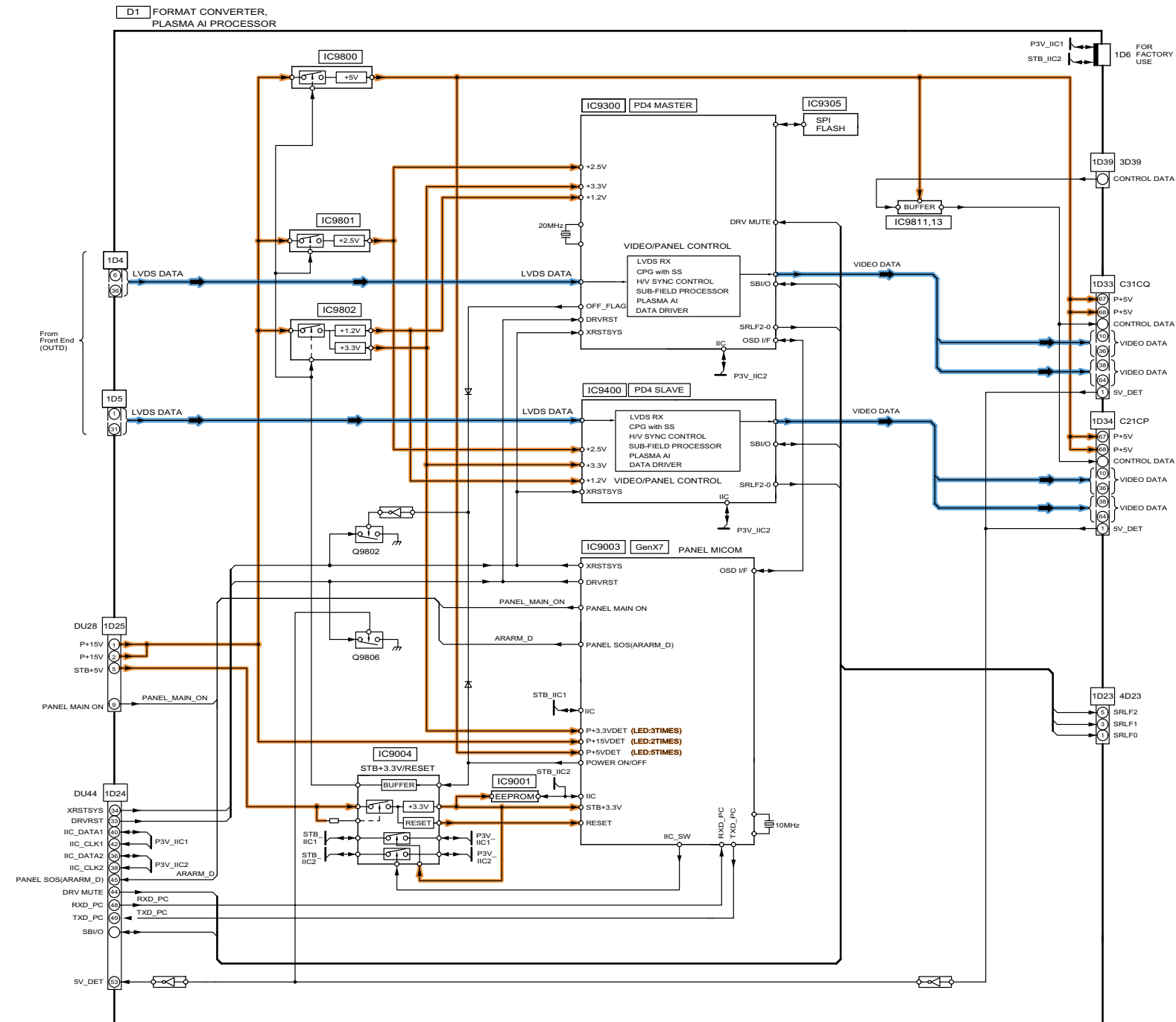


11.21. Block (14 of 23) Diagram

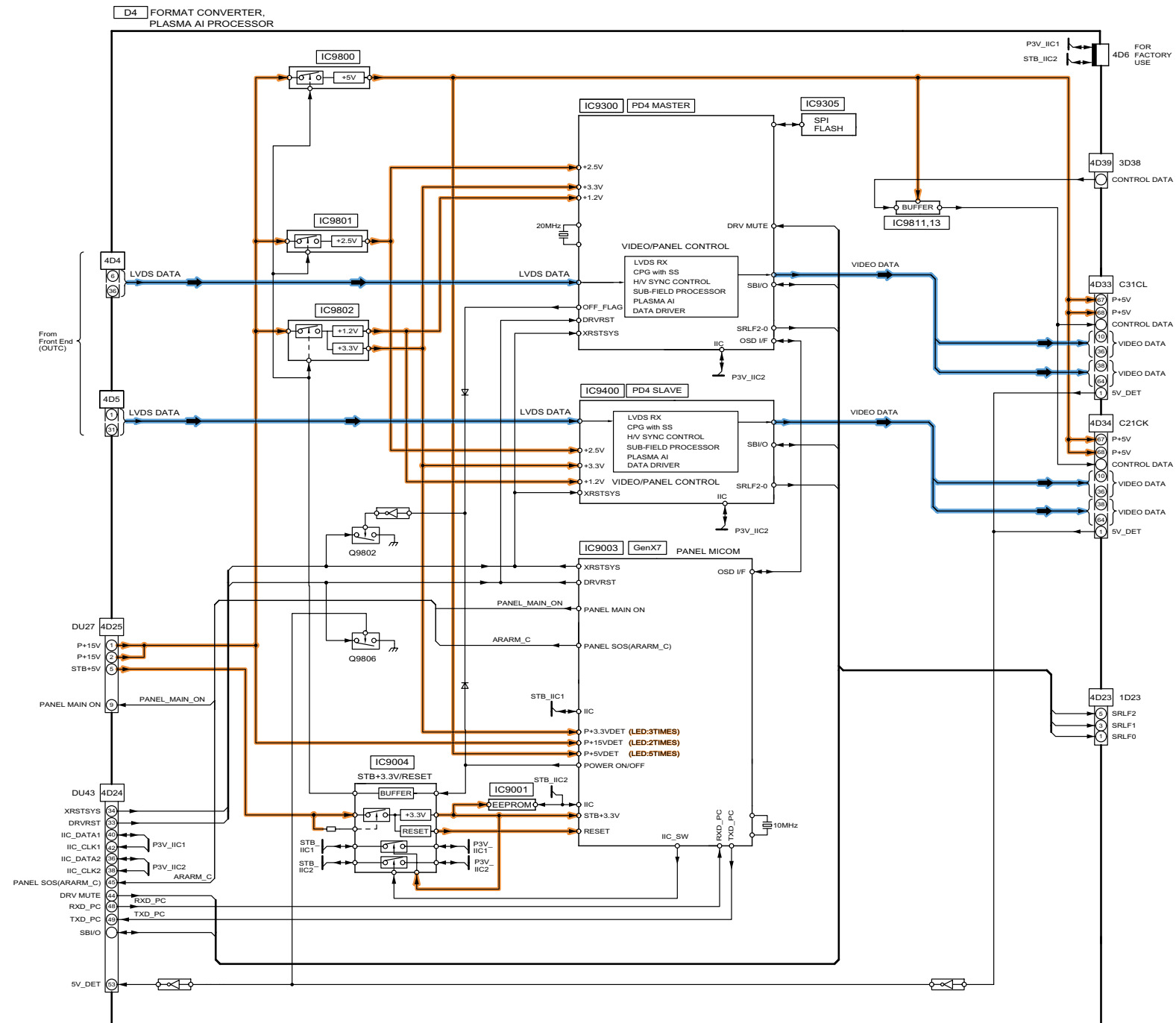


11.22. Block (15 of 23) Diagram



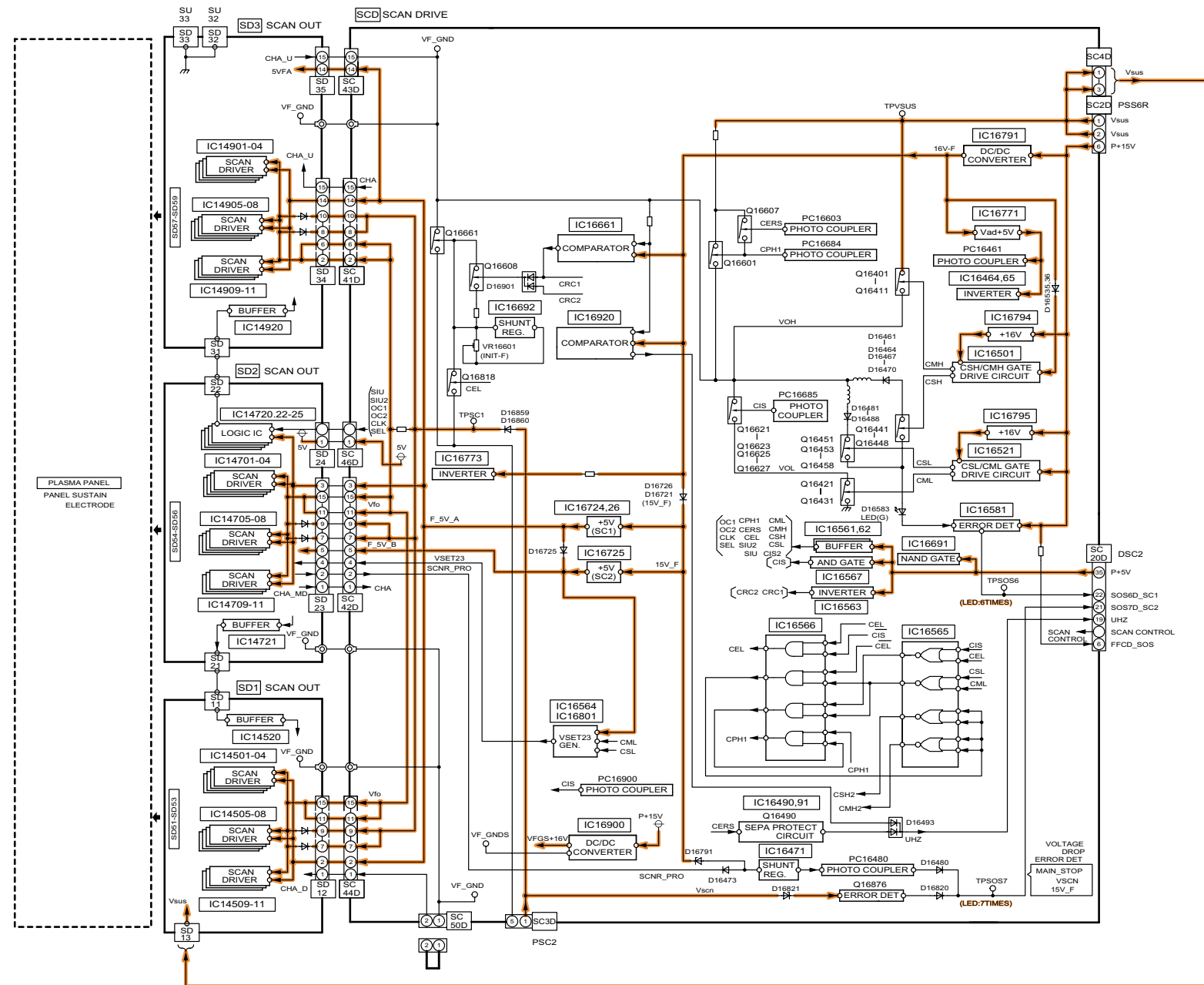


11.24. Block (17 of 23) Diagram





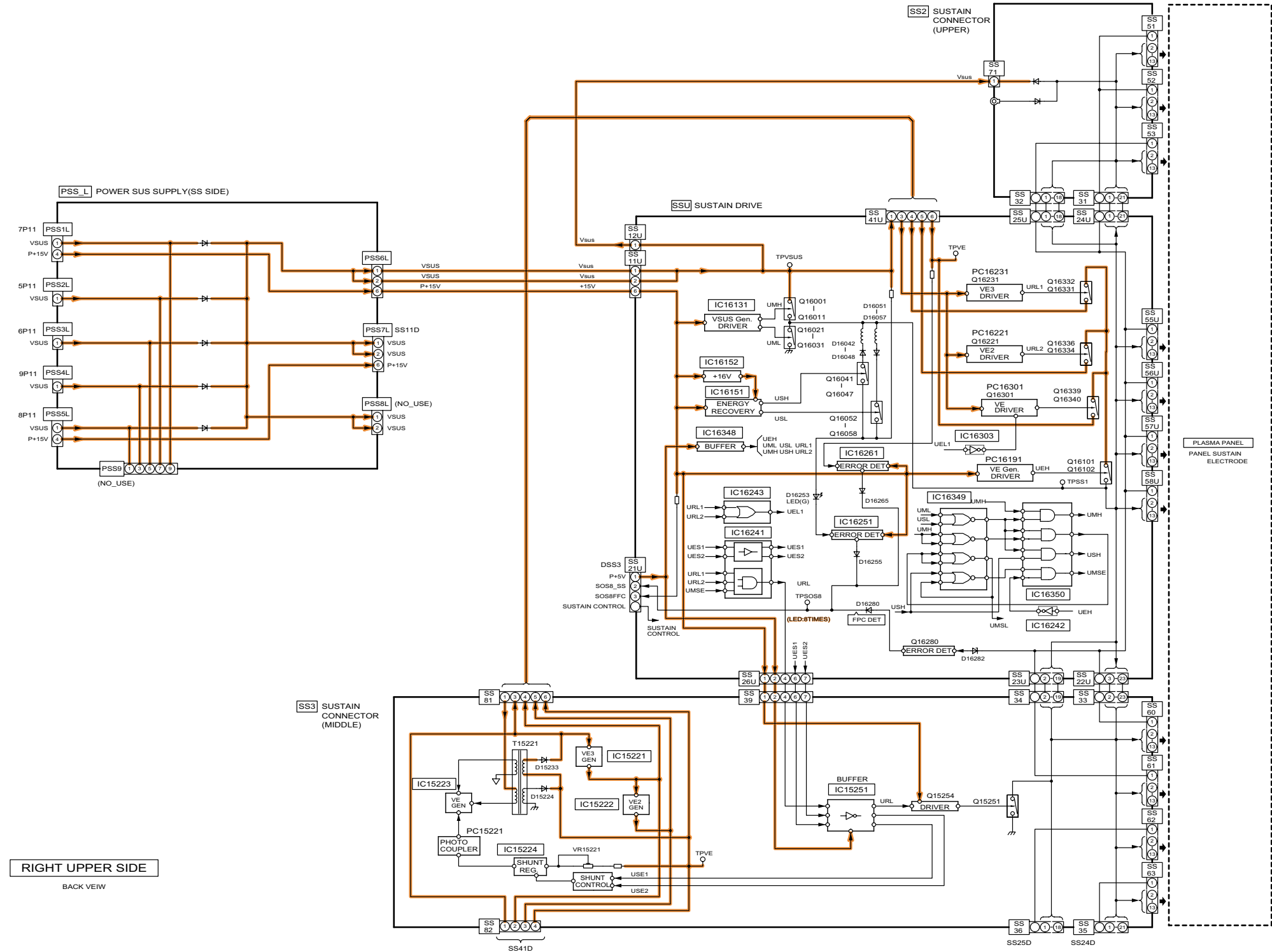
11.26. Block (19 of 23) Diagram



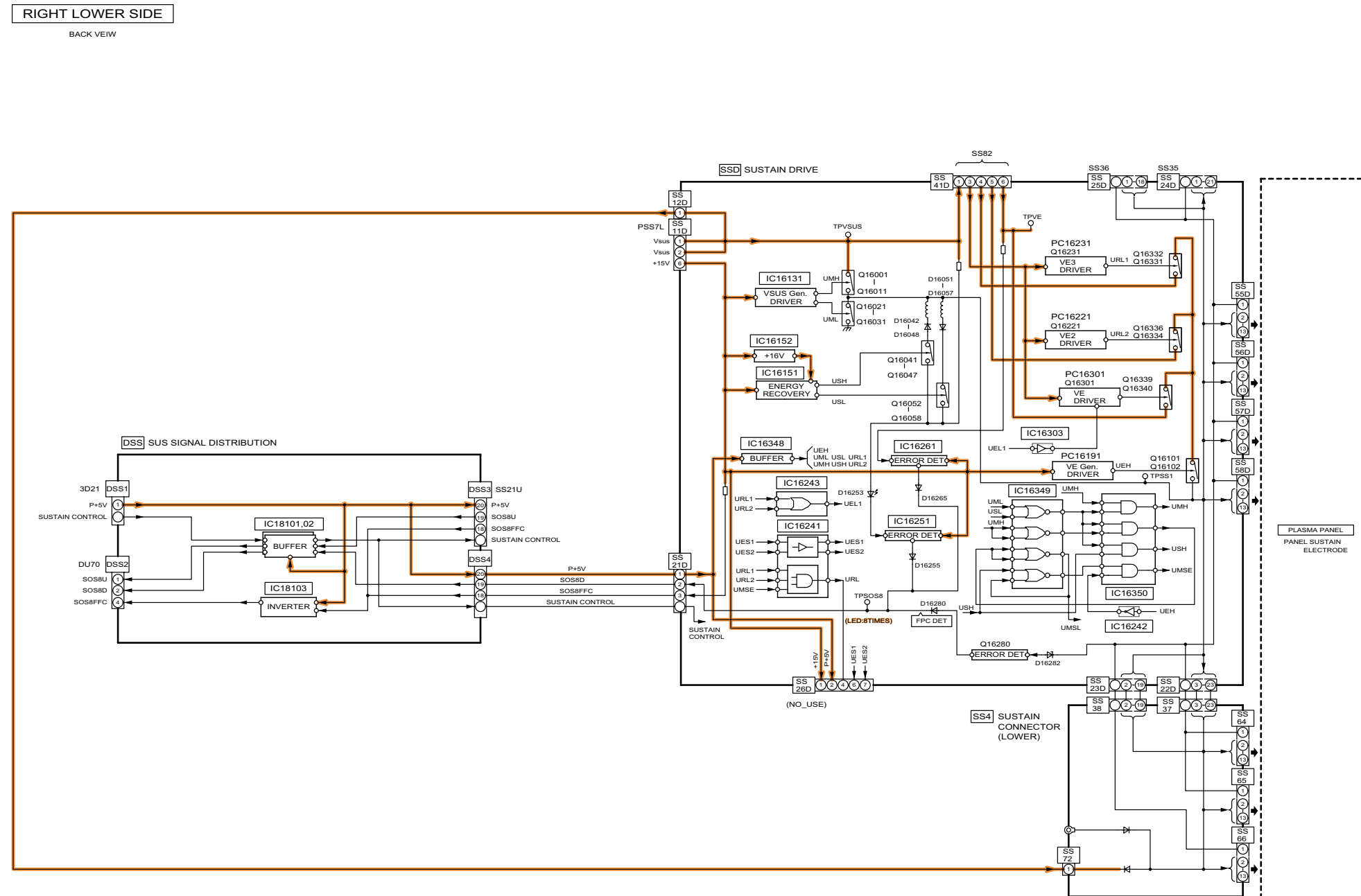
LEFT LOWER SIDE

[BACK VIEW](#)

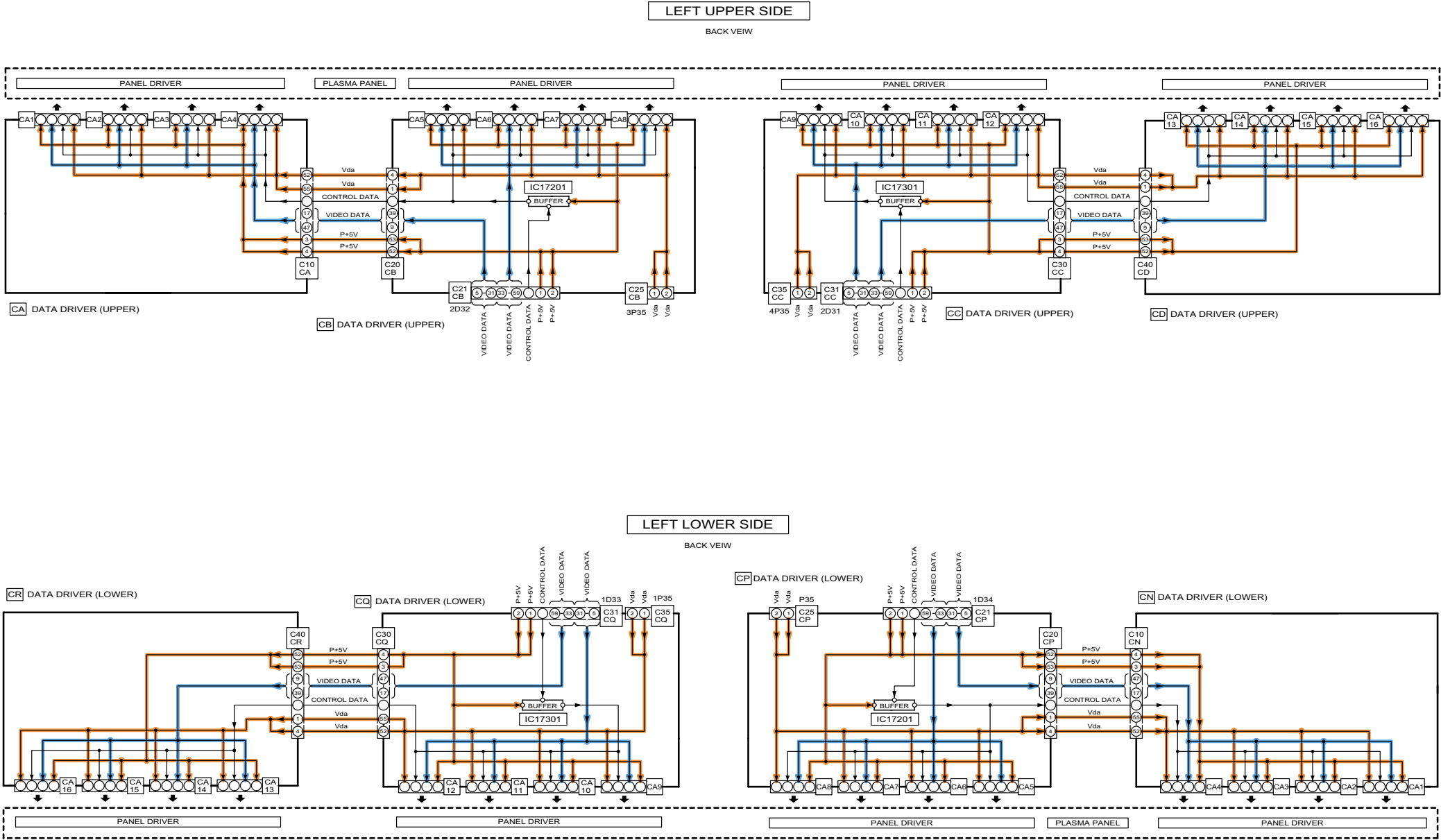
11.27. Block (20 of 23) Diagram



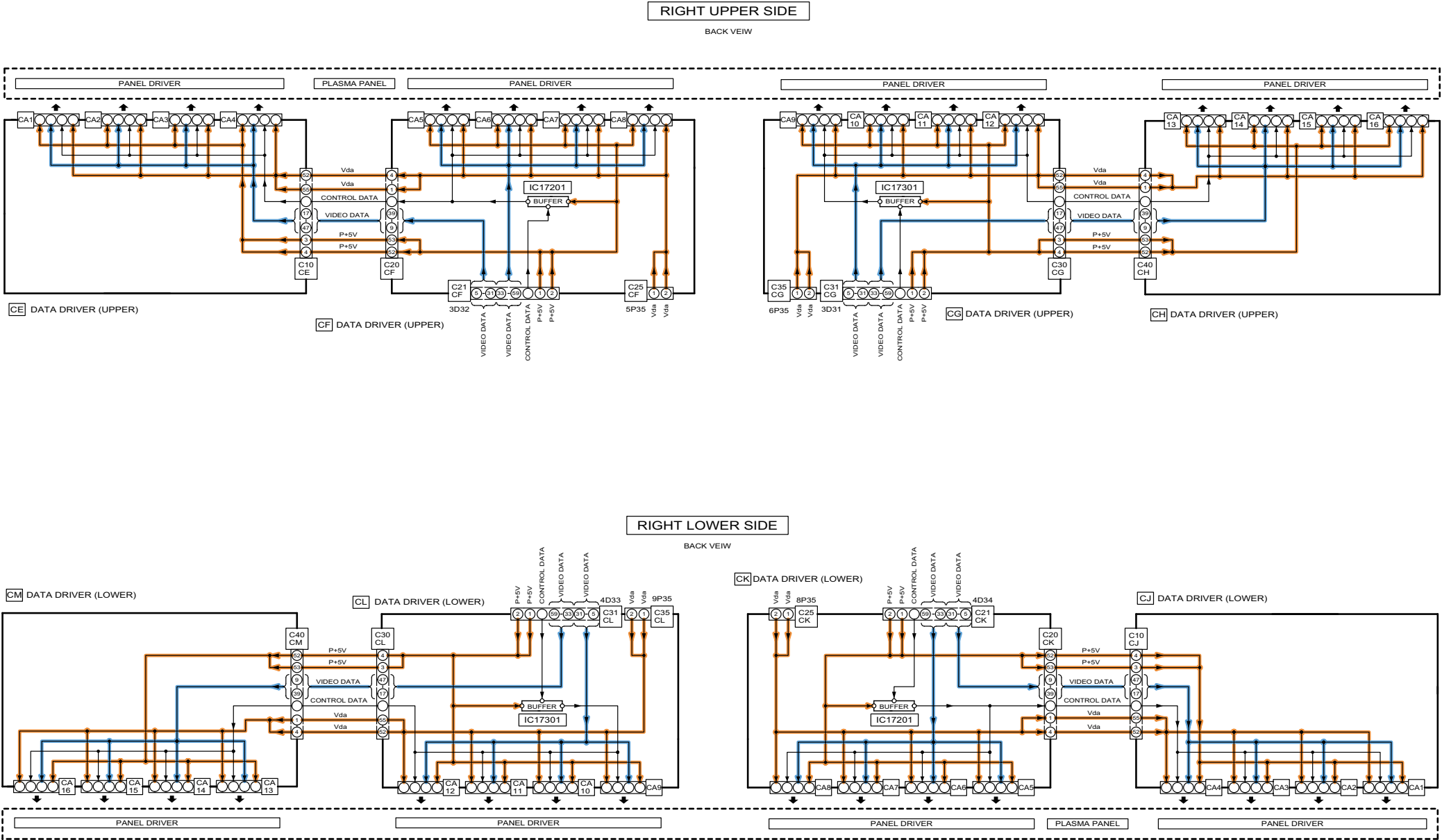
11.28. Block (21 of 23) Diagram



11.29. Block (22 of 23) Diagram

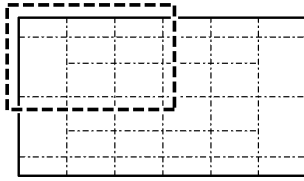


11.30. Block (23 of 23) Diagram

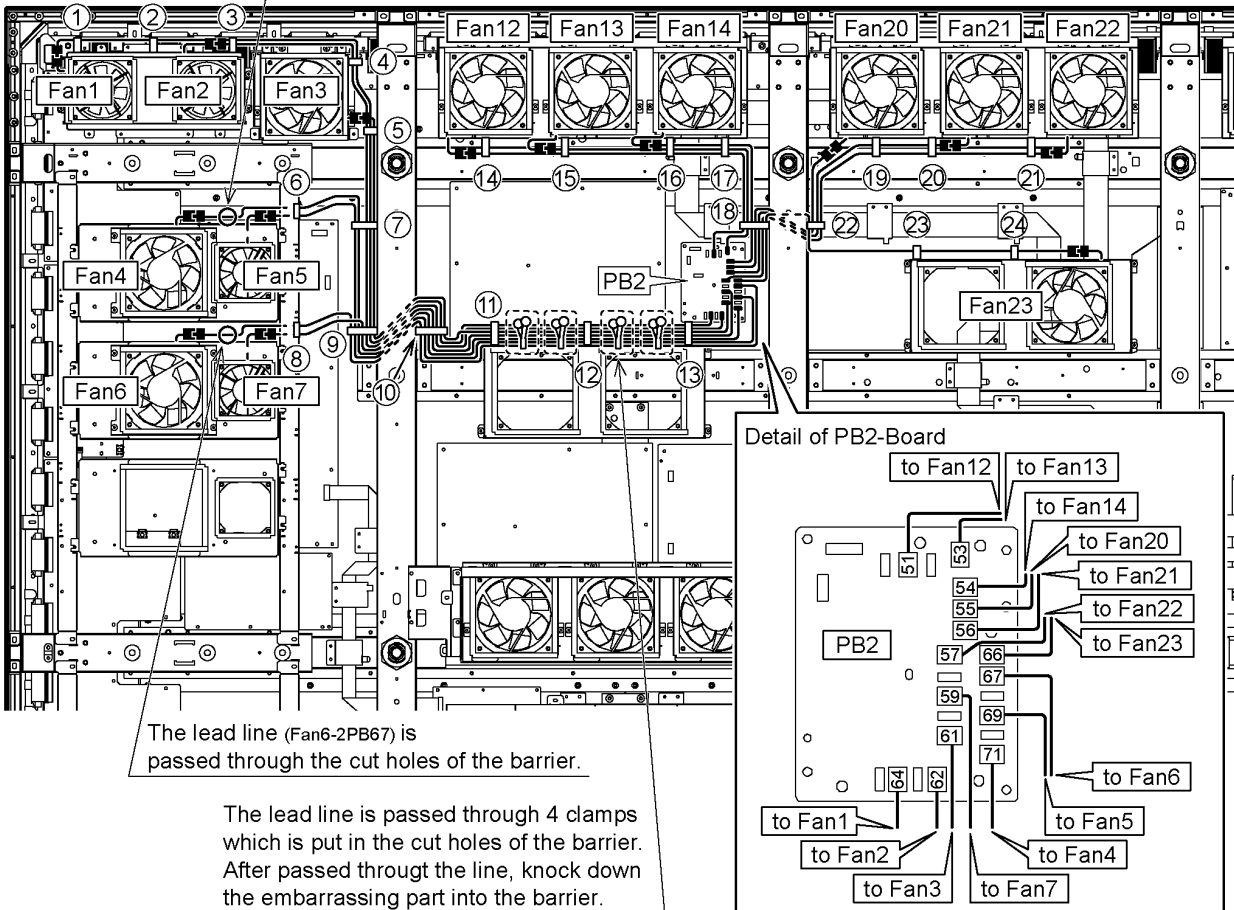


12 Wiring Connection Diagram

12.1. Wiring (Fan)

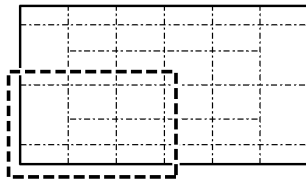


The lead line (Fan4-2PB71) is passed through the cut holes of the barrier.

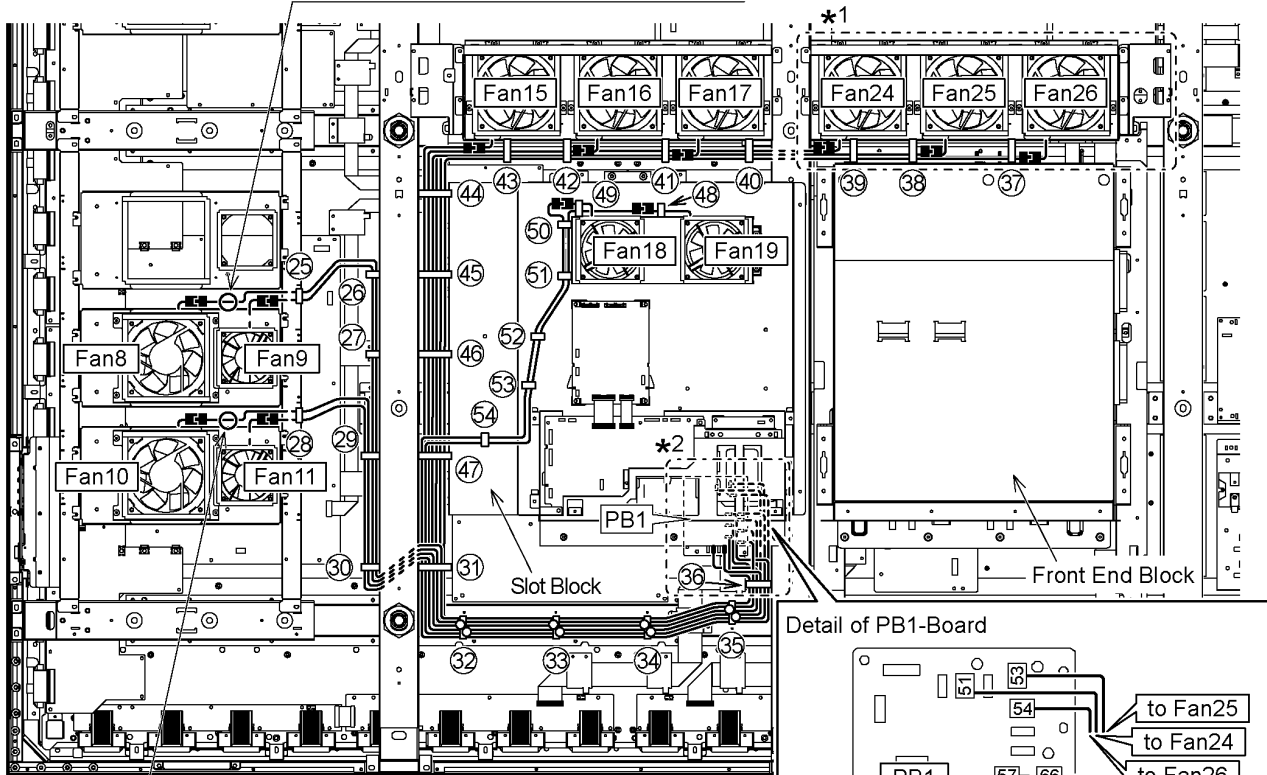


Clamp position

CON:No - CON:No	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭	⑮	⑯	⑰	⑱	⑲	⑳	㉑	㉒	㉓	㉔
Fan1-Relay - 2PB64	●	●	●	●	●		●		●	●	●	●	●											
Fan2-Relay - 2PB62			●	●	●		●		●	●	●	●	●											
Fan3-Relay - 2PB61					●		●		●	●	●	●	●											
Fan4-Relay - 2PB71						●	●		●	●	●	●	●											
Fan5-Relay - 2PB69						●	●		●	●	●	●	●											
Fan6-Relay - 2PB67								●	●	●	●	●	●											
Fan7-Relay - 2PB59								●	●	●	●	●	●											
Fan12-Relay - 2PB51														●	●	●	●	●						
Fan13-Relay - 2PB53															●	●	●	●	●					
Fan14-Relay - 2PB54																●	●	●	●					
Fan20-Relay - 2PB55																			●					
Fan21-Relay - 2PB56																			●	●	●	●	●	
Fan22-Relay - 2PB57																			●	●	●	●	●	●
Fan23-Relay - 2PB66																			●			●	●	●

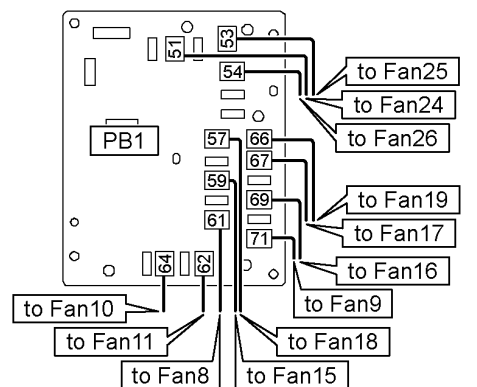


The lead line (Fan8-1PB61) is passed through the cut holes of the barrier.



The lead line (Fan10-1PB64) is passed through the cut holes of the barrier.

Detail of PB1-Board

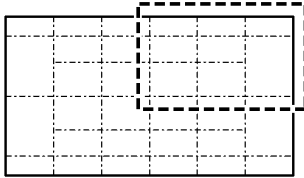


★1 : Fan24-Fan26 are installed after install Front End Block.

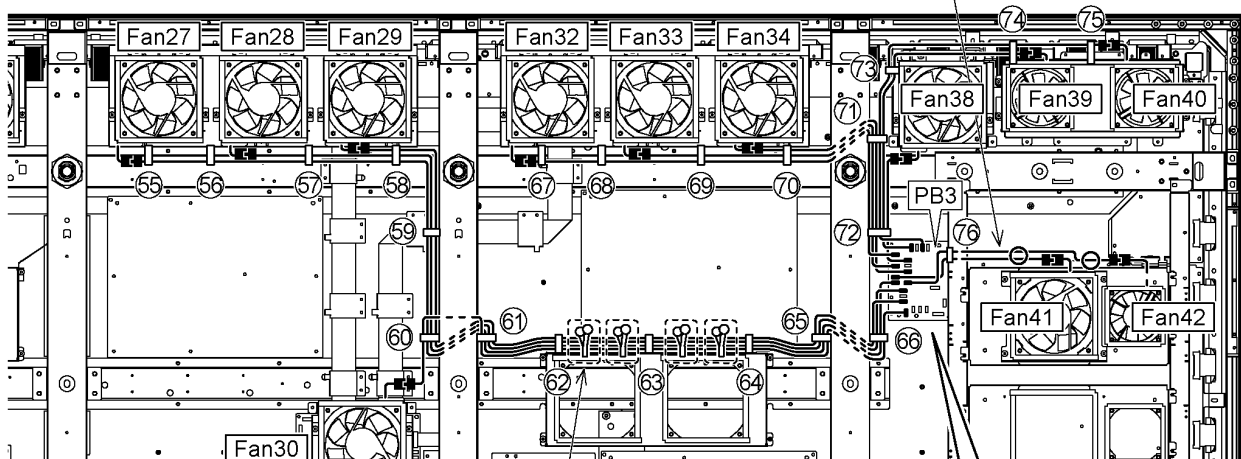
★2 : Connect the connectors to PB1-board before installing Slot Block.

Clamp position

CON:No - CON:No	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54
Fan8-Relay - 1PB61	●	●	●		●	●	●	●	●	●	●	●	●																	
Fan9-Relay - 1PB71	●	●	●		●	●	●	●	●	●	●	●	●																	
Fan10-Relay - 1PB64				●	●	●	●	●	●	●	●	●	●																	
Fan11-Relay - 1PB62				●	●	●	●	●	●	●	●	●	●																	
Fan15-Relay - 1PB59							●	●	●	●	●	●	●							●	●	●	●	●						
Fan16-Relay - 1PB69							●	●	●	●	●	●	●						●	●	●	●	●	●						
Fan17-Relay - 1PB67							●	●	●	●	●	●	●				●	●	●	●	●	●	●	●						
Fan18-Relay - 1PB57							●	●	●	●	●	●	●											●						
Fan19-Relay - 1PB66							●	●	●	●	●	●	●											●	●	●	●	●	●	●
Fan24-Relay - 1PB51							●	●	●	●	●	●	●			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Fan25-Relay - 1PB53							●	●	●	●	●	●	●			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Fan26-Relay - 1PB54							●	●	●	●	●	●	●			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

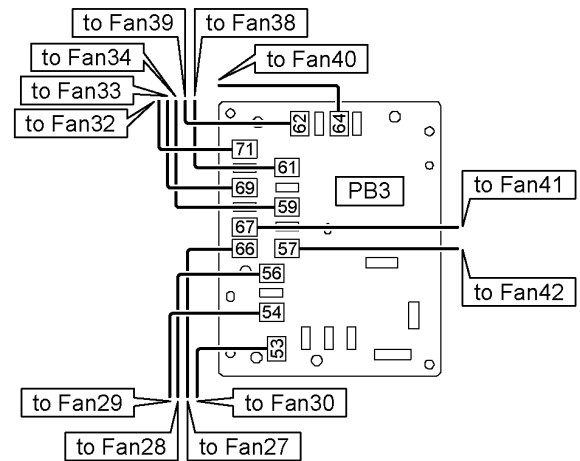


The lead lines on Fan Fixed Plate are passed through the cut holes of the barrier.



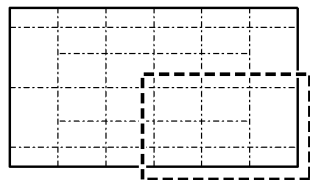
The lead line is passed through 4 clamps which is put in the cut holes of the barrier. After passed through the line, knock down the embarrassing part into the barrier.

Detail of PB3-Board



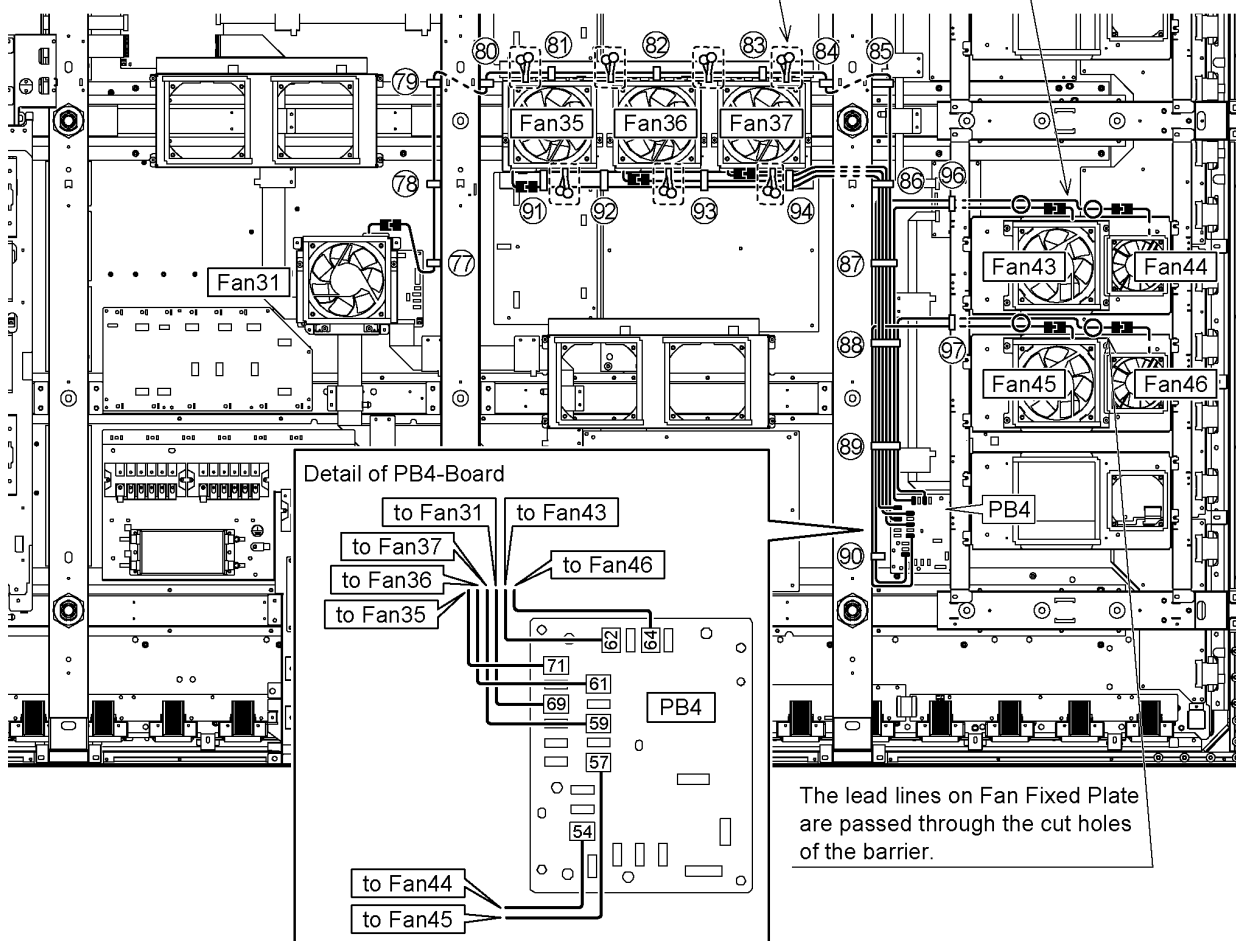
Clamp position

CON:No - CON:No	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76
Fan27-Relay - 3PB66	●	●	●	●	●	●	●	●	●	●	●	●										
Fan28-Relay - 3PB56			●	●	●	●	●	●	●	●	●	●										
Fan29-Relay - 3PB54				●	●	●	●	●	●	●	●	●										
Fan30-Relay - 3PB53					●	●	●	●	●	●	●	●										
Fan32-Relay - 3PB71													●	●	●	●	●	●				
Fan33-Relay - 3PB69															●	●	●	●				
Fan34-Relay - 3PB59																●	●	●				
Fan38-Relay - 3PB61																	●	●				
Fan39-Relay - 3PB62																	●	●	●	●		
Fan40-Relay - 3PB64																	●	●	●	●	●	
Fan41-Relay - 3PB67																		●	●	●	●	●
Fan42-Relay - 3PB57																						●



The lead lines on Fan Fixed Plate are passed through the cut holes of the barrier.

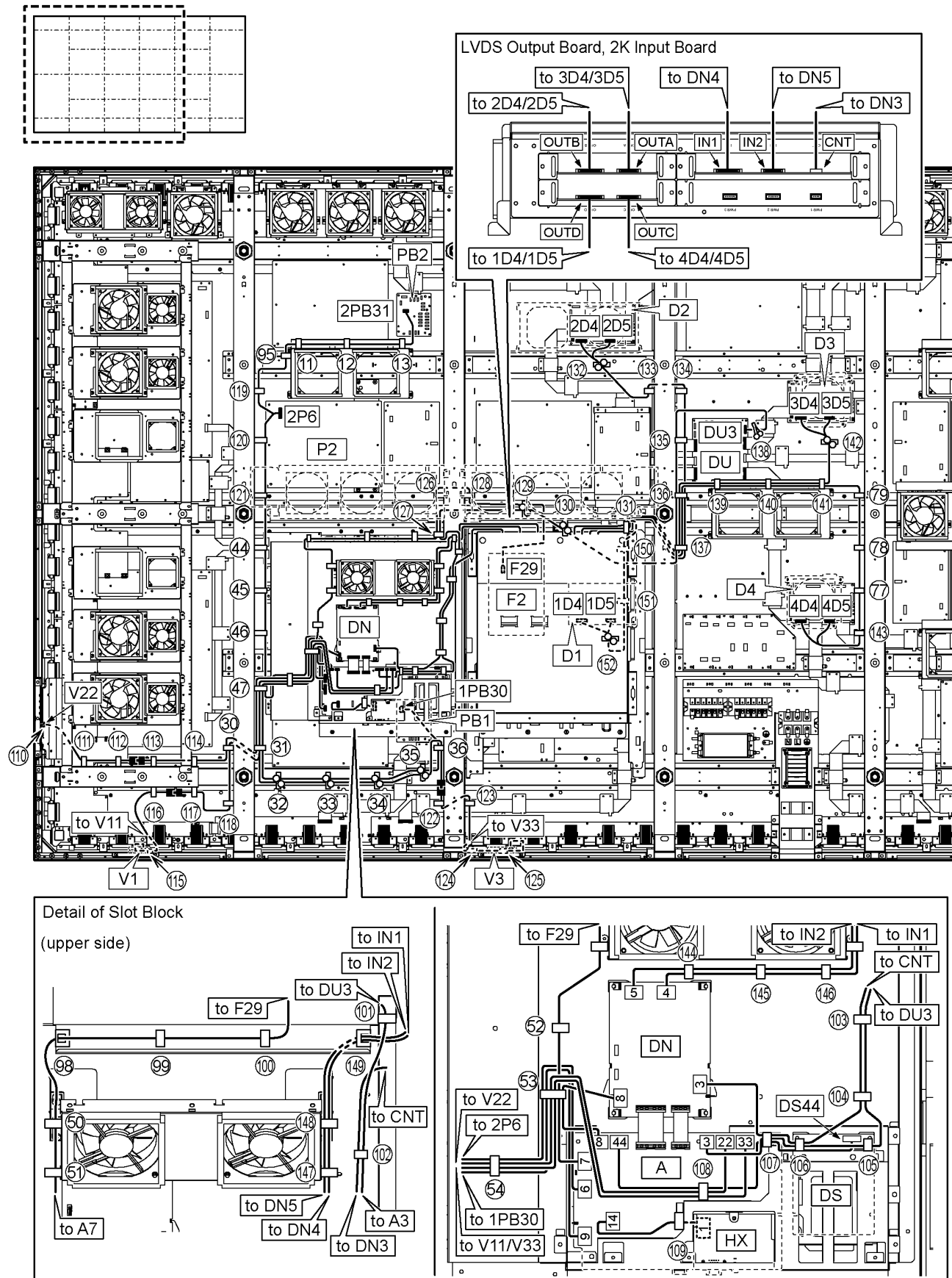
The lead line is passed through 7 clamps which is put in the cut holes of the barrier. After passed through the line, knock down the embarrassing part into the barrier.



Clamp position

CON:No - CON:No	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	96	97
Fan31-Relay - 4PB69	●	●	●	●	●	●	●	●	●	●	●	●	●							
Fan35-Relay - 4PB71										●	●	●	●		●	●	●	●		
Fan36-Relay - 4PB61										●	●	●	●				●	●		
Fan37-Relay - 4PB59										●	●	●	●					●		
Fan43-Relay - 4PB62											●	●	●						●	
Fan44-Relay - 4PB54											●	●	●						●	
Fan45-Relay - 4PB57												●	●	●	●					●
Fan46-Relay - 4PB64												●	●							●

12.2. Wiring (Slot Block, Front End Block, V1, V2, V3-Board)



Clamp position

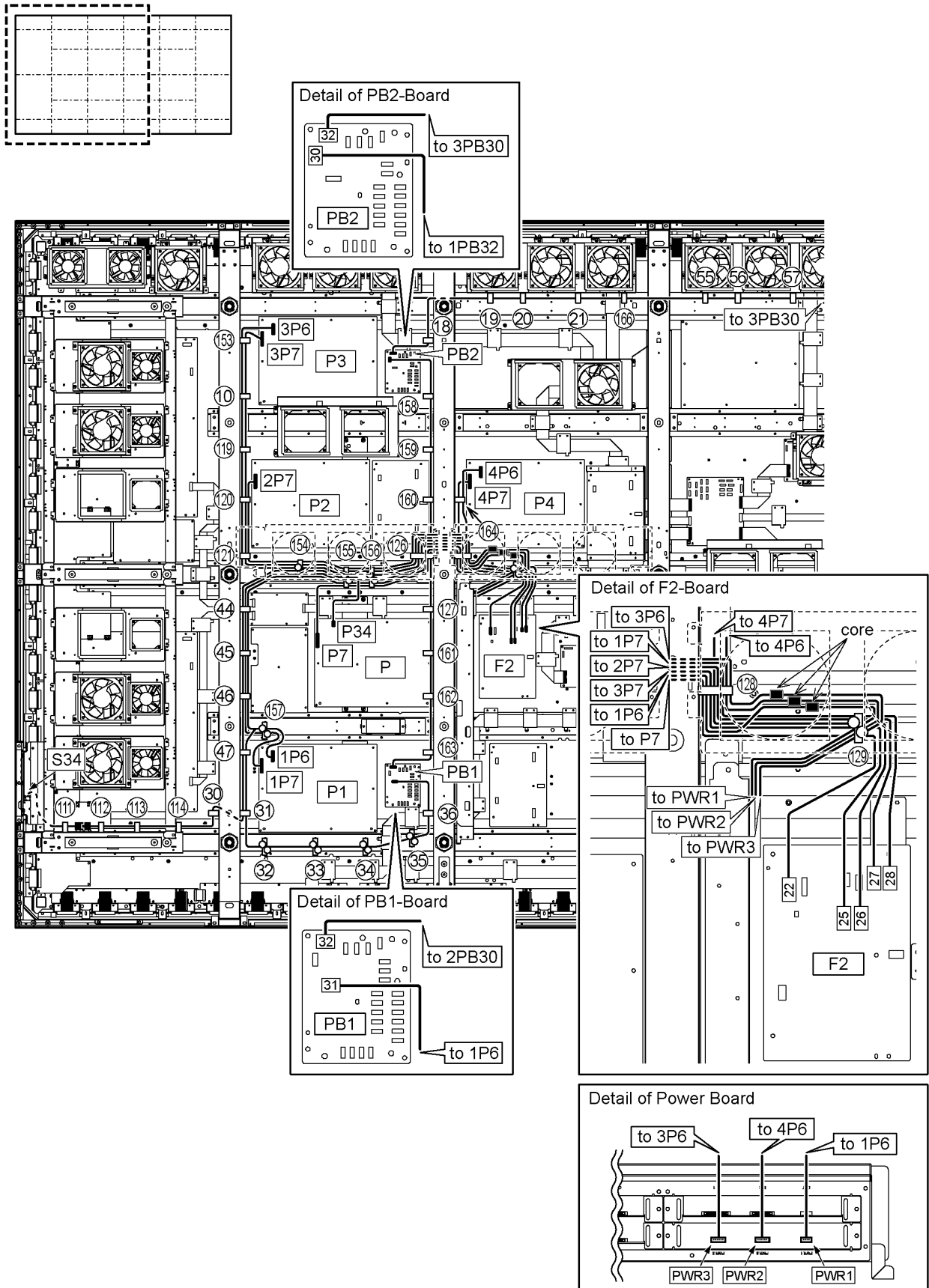
CON:No	-	CON:No	(11)	(12)	(13)	(44)	(45)	(46)	(47)	(53)	(54)	(95)	(119)	(120)	(121)
2P6	-	A6				●	●	●	●	●	●			●	●
	-	2PB31	●	●	●							●	●		

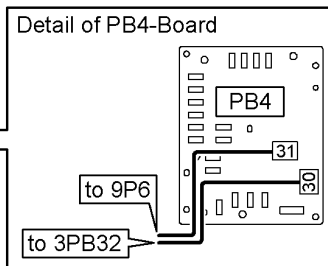
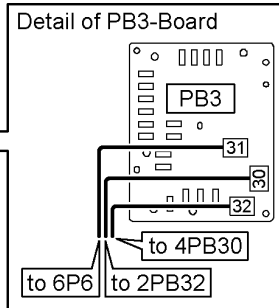
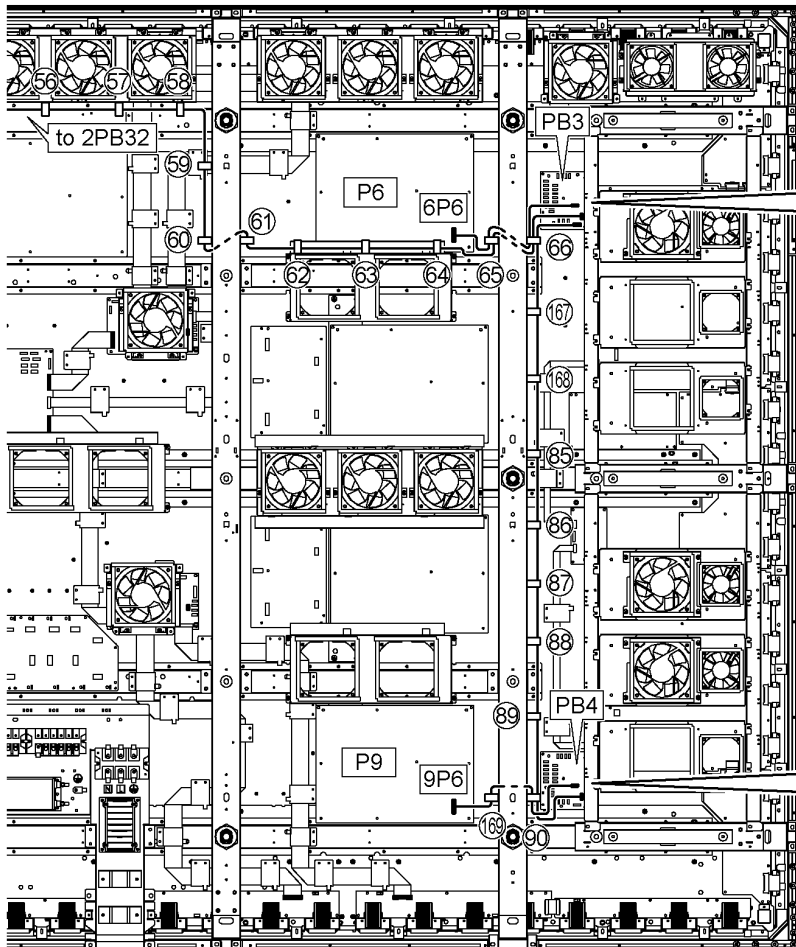
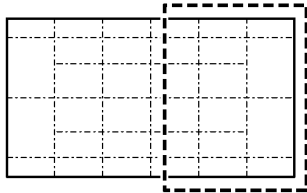
CON:No	-	CON:No	(50)	(51)	(52)	(53)	(98)	(99)	(100)	(101)	(102)	(103)	(104)	(105)	(106)	(107)	(126)	(127)	(128)	(129)	(130)	(135)	(136)	(137)	(138)
A3	-	DU3								●	●	●	●	●	●	●		●		●	●	●	●	●	●
A7	-	F29	●	●	●	●	●	●	●								●	●	●	●					

CON:No	-	CON:No	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(47)	(53)	(54)	(106)	(107)	(108)	(109)	(110)	(111)	(112)	(113)	(114)	(115)	(116)	(117)	(118)	(122)	(123)	(124)	(125)
A8	-	DN8									●																		
A9	-	1PB30		●	●	●	●	●	●	●	●	●																	
A14	-	HX1														●													
A22	-	V22	●	●						●	●	●			●		●	●	●	●	●								
A33	-	V11		●						●	●	●			●							●	●	●	●				
	-	V33		●	●	●	●	●	●	●	●	●			●											●	●	●	●
A44	-	DS44											●	●	●														

CON:No - CON:No	(77)	(78)	(79)	(102)	(103)	(104)	(106)	(107)	(131)	(132)	(133)	(134)	(135)	(136)	(137)	(139)	(140)	(141)	(142)	(143)	(144)	(145)	(146)	(147)	(148)	(149)	(150)	(151)	(152)	
DN3 - CNT				●	●	●	●	●																						
DN4 - IN1																						●	●	●	●	●	●			
DN5 - IN2																						●	●	●	●	●	●			
OUTA - 3D4/3D5									●					●	●	●	●	●	●											
OUTB - 2D4/2D5									●	●	●	●	●	●	●															
OUTC - 4D4/4D5	●	●	●						●					●	●	●	●	●		●										
OUTD - 1D4/1D5									●																			●	●	●

12.3. Wiring (F2, PB1, PB2, PB3, PB4-Board)





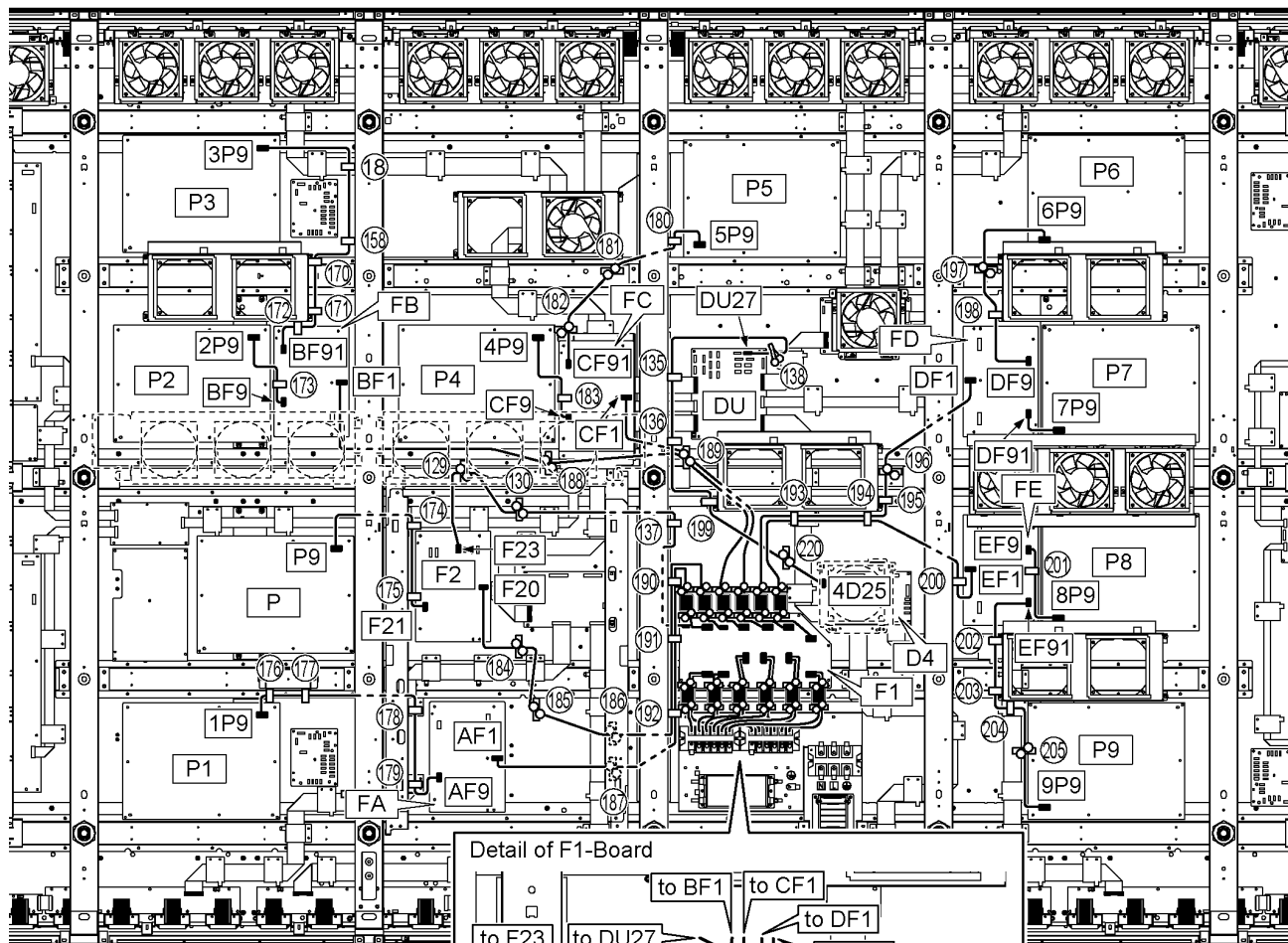
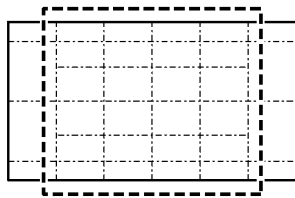
Clamp position

CON:No - CON:No	10	30	31	32	33	34	35	36	44	45	46	47	111	112	113	114	119	120	121	126	128	129	153	154	155	156	157	164
P7 - F22																												
P34 - S34		●	●						●	●	●	●	●	●	●	●					●	●		●	●	●		
1P6 - PWR1									●	●	●									●	●	●		●	●	●	●	
1P6 - 1PB31			●	●	●	●	●	●				●															●	
1P7 - F28									●	●	●										●	●	●		●	●	●	●
2P7 - F27																			●	●	●	●	●		●	●	●	
3P6 - PWR3	●																	●	●	●	●	●	●	●	●	●	●	
3P7 - F25	●																	●	●	●	●	●	●	●	●	●	●	
4P6 - PWR2																					●	●						●
4P7 - F26																					●	●						●

CON:No - CON:No	18	19	20	21	55	56	57	58	59	60	61	62	63	64	65	66	126	127	158	159	160	161	162	163	166
2PB30 - 1PB32																	●	●	●	●	●	●	●	●	
2PB32 - 3PB30	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●									●

CON:No - CON:No	65	66	85	86	87	88	89	90	167	168	169
3PB31 - 6P6	●	●									
3PB32 - 4PB30		●	●	●	●	●	●	●	●		
9P6 - 4PB31							●			●	

12.4. Wiring (F1, FA, FB, FC, FD, FE-Board)



Lead line (DU27-4D25) is passed over lead line F53, F54 and under lead line F55, F56.

Clamp position

CON:No - CON:No	129	130	137	184	185	186	187	188	189	190	191	192	193	194	195	196	200
F19 - F23	●	●	●														
F51 - AF1							●			●	●	●					
F52 - F20				●	●	●				●	●	●					
F53 - BF1								●	●								
F54 - CF1									●								
F55 - DF1													●	●	●	●	
F56 - EF1													●	●			●

CON:No - CON:No	18	135	136	138	158	170	171	172	173	174	175	176	177	178	179	180	181	182	183	197	198	199	201	202	203	204	205	220
DU27 - 4D25		●	●	●																		●						●
F21 - P9										●	●												●					
AF9 - 1P9												●	●	●	●													
BF9 - 2P9									●																			
BF91 - 3P9	●				●	●	●	●																				
CF9 - 4P9																			●									
CF91 - 5P9																	●	●	●									
DF9 - 6P9																				●	●							
DF91 - 7P9	No Clamp																											
EF9 - 8P9																							●					
EF91 - 9P9																								●	●	●	●	



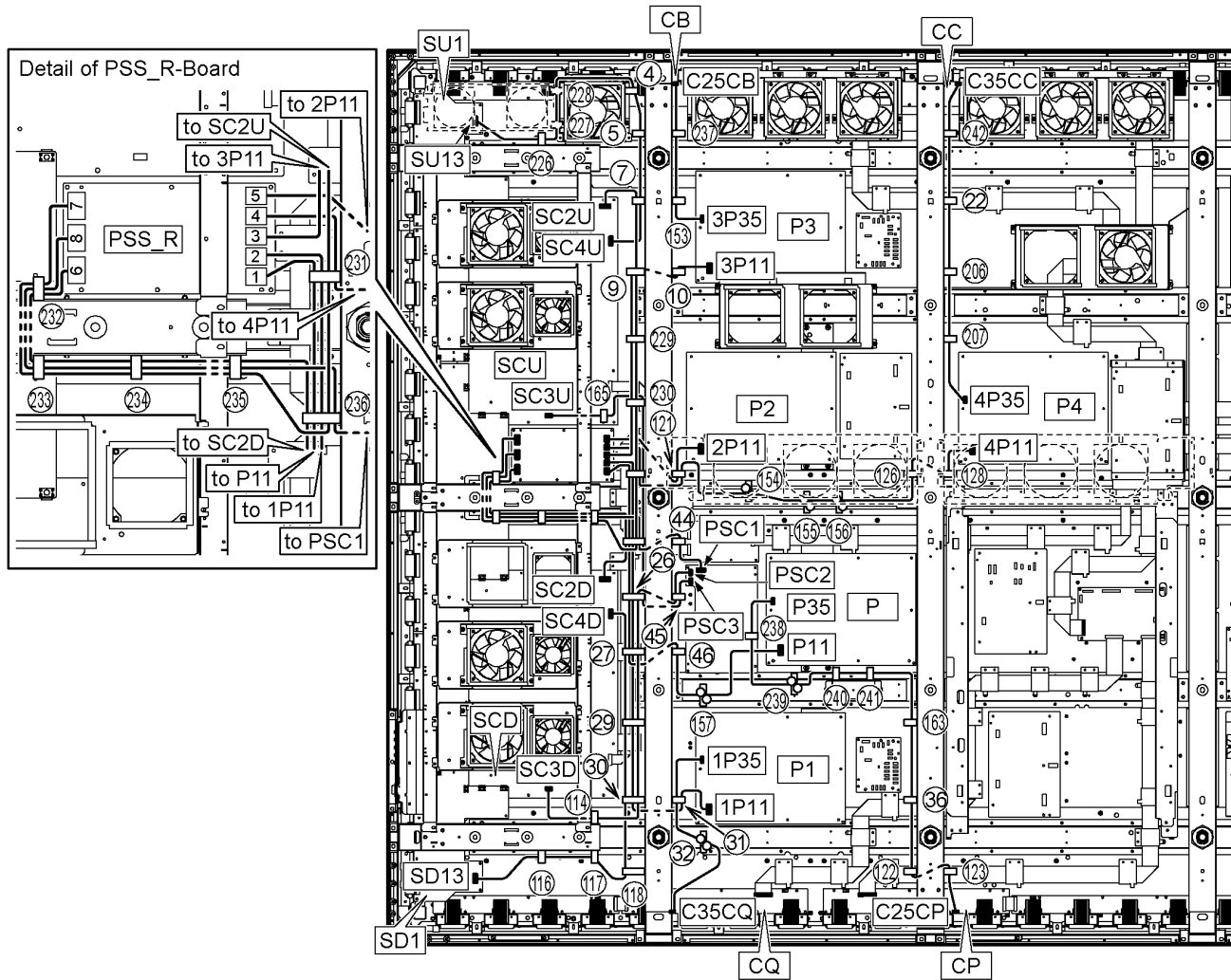
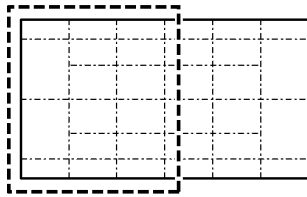
Clamp position

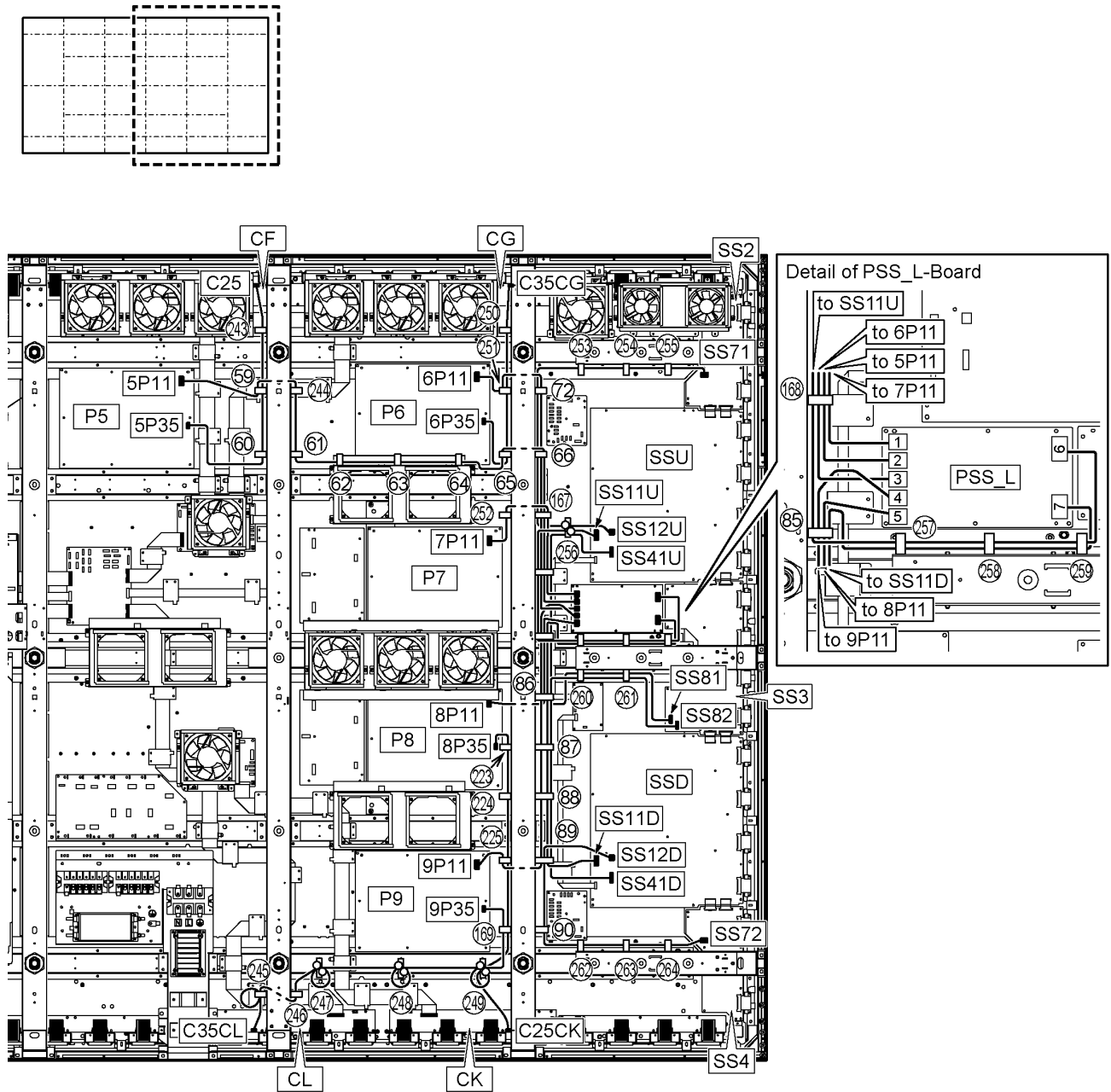
CON:No - CON:No	24	44	45	46	126	128	129	130	133	134	135	136	137	138	154	155	156	157	211	212	213	220
DU25 - 3D25																						
DU26 - 2D25	●								●	●									●	●	●	
DU28 - 1D25								●			●	●	●									
DU50 - P25					●	●	●	●			●	●	●			●	●					
DU51 - 1P25		●	●	●	●	●	●	●			●	●	●		●	●	●	●				

CON:No - CON:No	10	11	12	13	61	62	63	64	65	79	80	81	82	83	84	95	119	133	134	138	153	206	207	208	209	210	217	218	219	221
DU52 - 2P25		●	●	●													●	●	●	●		●		●	●	●				
DU53 - 3P25	●	●	●	●															●	●		●		●	●	●				
DU54 - 4P25																			●	●			●	●	●	●				
DU55 - 5P25					●																						●	●	●	●
DU56 - 6P25					●	●	●	●	●																		●	●	●	●
DU57 - 7P25										●	●	●	●	●	●					●							●			

CON:No - CON:No	77	78	79	80	86	87	88	89	91	92	93	94	133	134	136	137	139	140	141	169	213	214	215	216	217	219	222
DU58 - 8P25			●	●	●	●			●	●	●	●					●	●	●								●
DU59 - 9P25			●	●	●	●	●	●	●	●	●	●					●	●	●	●							●
DU70 - DSS2			●	●	●				●	●	●	●					●	●	●								●
1D23 - 4D23	●	●	●												●	●	●	●	●								
1D39 - 3D39			●												●	●	●	●	●							●	
2D22 - 3D22														●	●						●	●	●	●	●		
2D36 - 3D36														●	●						●	●	●	●	●		
3D21 - DSS1			●	●	●				●	●	●	●										●	●	●	●	●	●
3D38 - 4D39	●	●	●																							●	

12.6. Wiring (SD1, SU1, SS2, SS3, SS4, SCD, SCU, PSC1, PSS_R, PSS_L, CB, CC, CF, CG, CK, CL, CP, CQ-Board)





Clamp position

CON:No - CON:No	⑦	⑨	⑩	26	27	29	30	31	44	46	121	126	128	154	155	156	157	229	230	231	232	233	234	235	236
PSS1R - P11				●	●					●							●			●					●
PSS2R - 1P11				●	●	●	●	●												●					●
PSS3R - 3P11		●	●																●	●					
PSS4R - 4P11											●	●	●	●	●	●				●					
PSS5R - 2P11											●														
PSS6R - SC2D																					●	●	●	●	●
PSS7R - SC2U	●	●																●	●	●	●	●	●	●	●
PSS8R - PSC1									●												●	●	●	●	●

CON:No - CON:No	④	⑤	⑦	26	27	29	30	45	114	116	117	118	169	226	227	228	230	231	236
SC3D - PSC2				●	●	●	●	●	●										
SC4D - SD13					●	●	●			●	●	●							
SC3U - PSC3				●				●					●				●	●	●
SC4U - SU13	●	●	●											●	●	●			

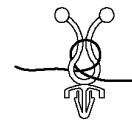
CON:No - CON:No	22	31	32	36	122	123	153	163	206	207	237	238	239	240	241	242
P35 - C25CP				●	●	●		●				●	●	●	●	
1P35 - C35CQ		●	●													
3P35 - C25CB							●				●					
4P35 - C35CC	●							●	●							●

CON:No - CON:No	59	61	62	63	64	65	66	72	85	86	87	88	89	167	168	225	244	251	252	256	257	258	259
PSS1L - 7P11														●	●				●				
PSS2L - 5P11	●	●	●	●	●	●	●							●	●		●						
PSS3L - 6P11							●	●						●	●			●					
PSS4L - 9P11									●	●	●	●	●				●						
PSS5L - 8P11									●	●													
PSS6L - SS11U									●							●				●	●	●	●
PSS7L - SS11D									●	●	●	●	●							●	●	●	●

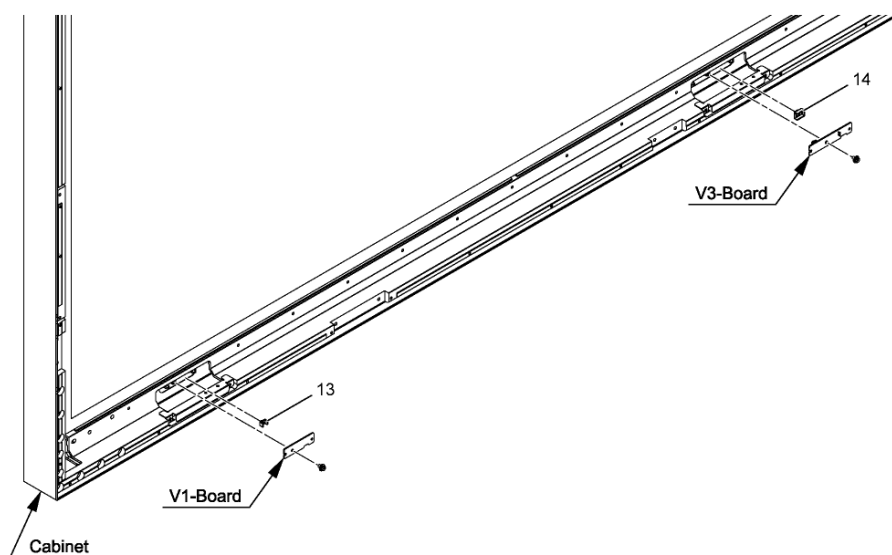
CON:No - CON:No	66	72	85	86	87	88	89	90	167	168	253	254	255	256	260	261	262	263	264
SS71 - SS12U	●	●							●		●	●	●	●					
SS72 - SS12D							●	●									●	●	●
SS81 - SS41U			●	●						●					●	●	●		
SS82 - SS41D			●	●	●	●									●	●			

CON:No - CON:No	59	60	65	169	223	224	225	243	245	246	247	248	249	250	251
5P35 - C25CF	●	●						●							
6P35 - C35CG			●											●	●
8P35 - C25CK				●	●	●	●						●		
9P35 - C35CL				●				Ⅱ	●	Ⅱ	Ⅱ	Ⅱ			

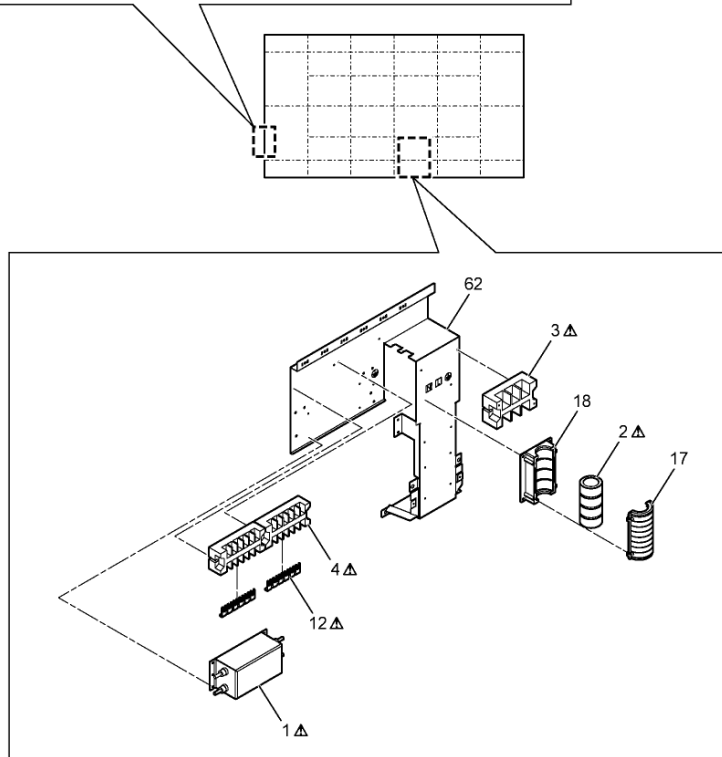
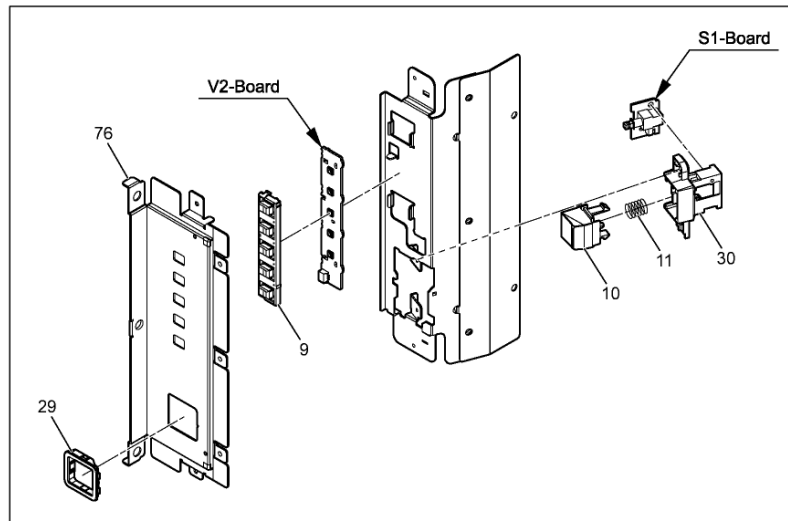
Ⅱ It is passing which passes clasper to two degrees.



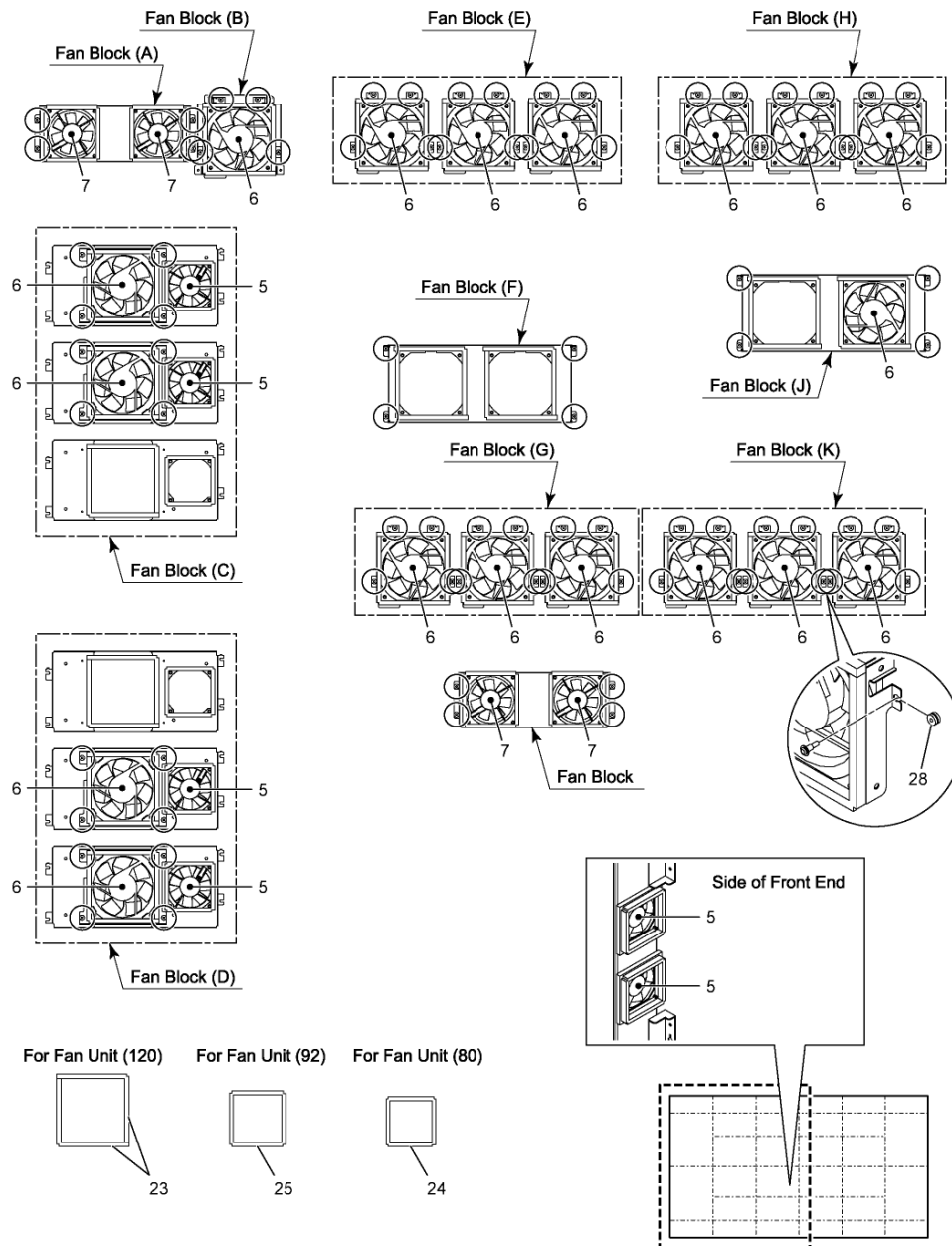
Model No. : TH-152UX1/W/C Cabinet part location



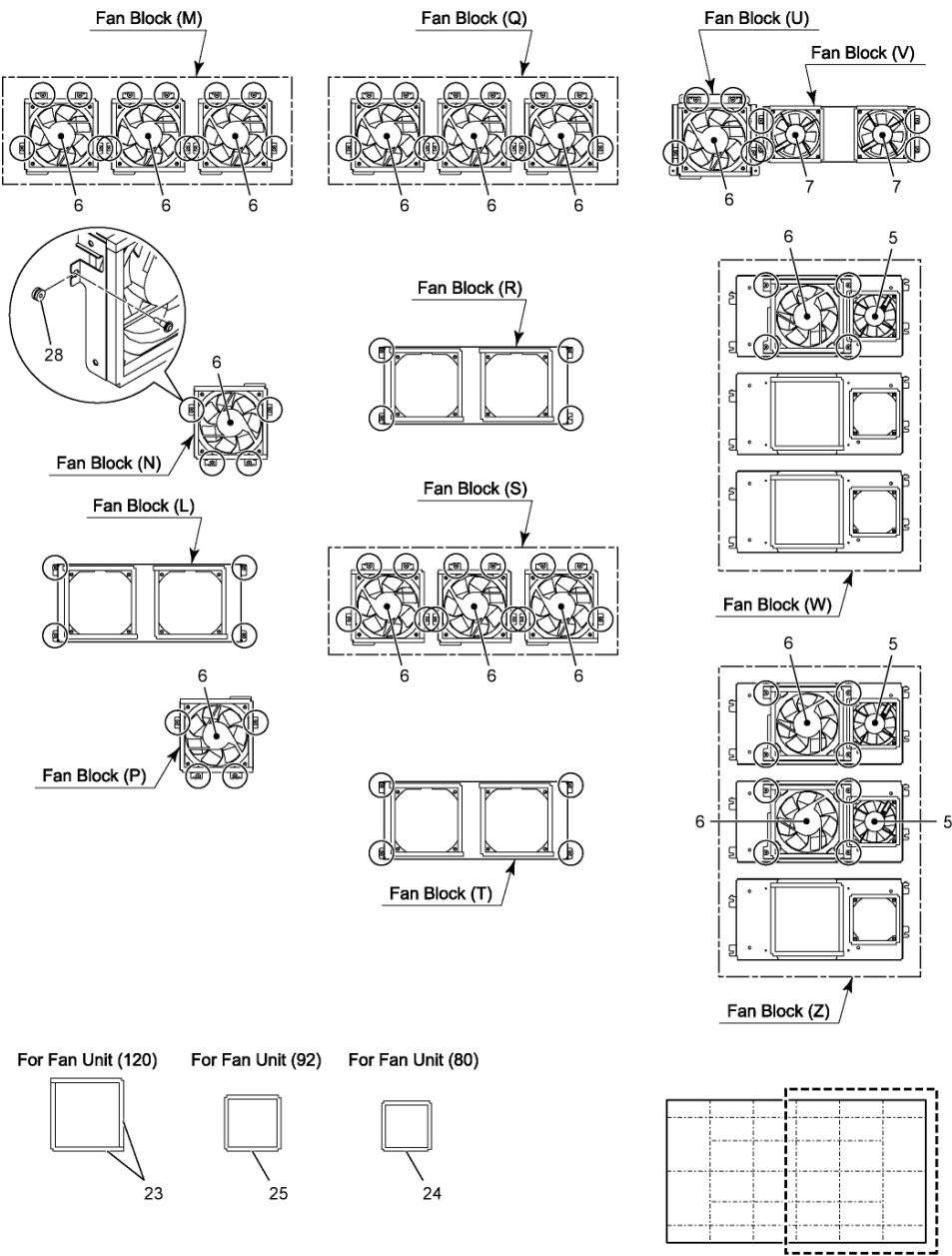
Model No. : TH-152UX1/W/C Side Power and Terminal Block part location



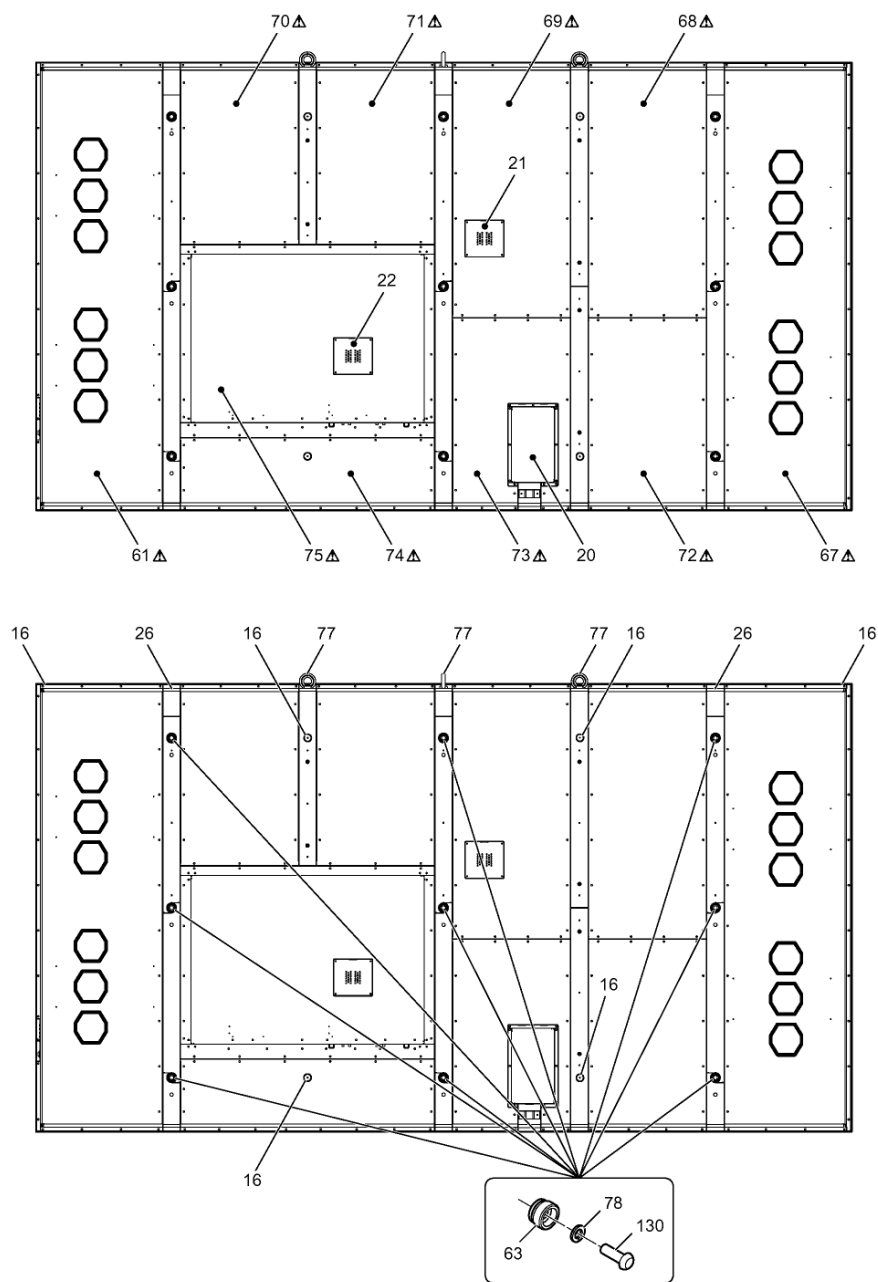
Model No. : TH-152UX1/W/C Fan part location (1)

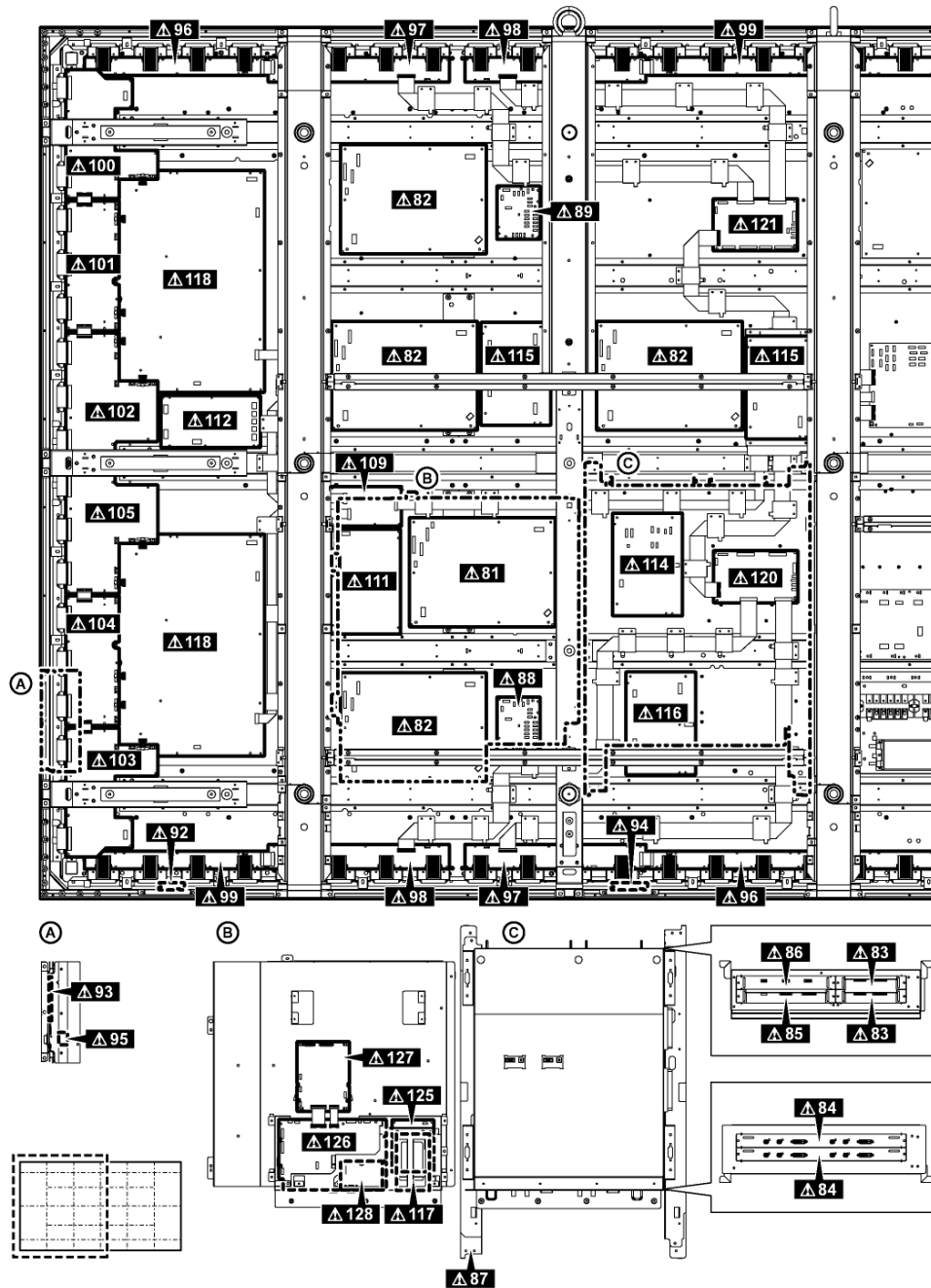


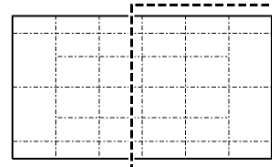
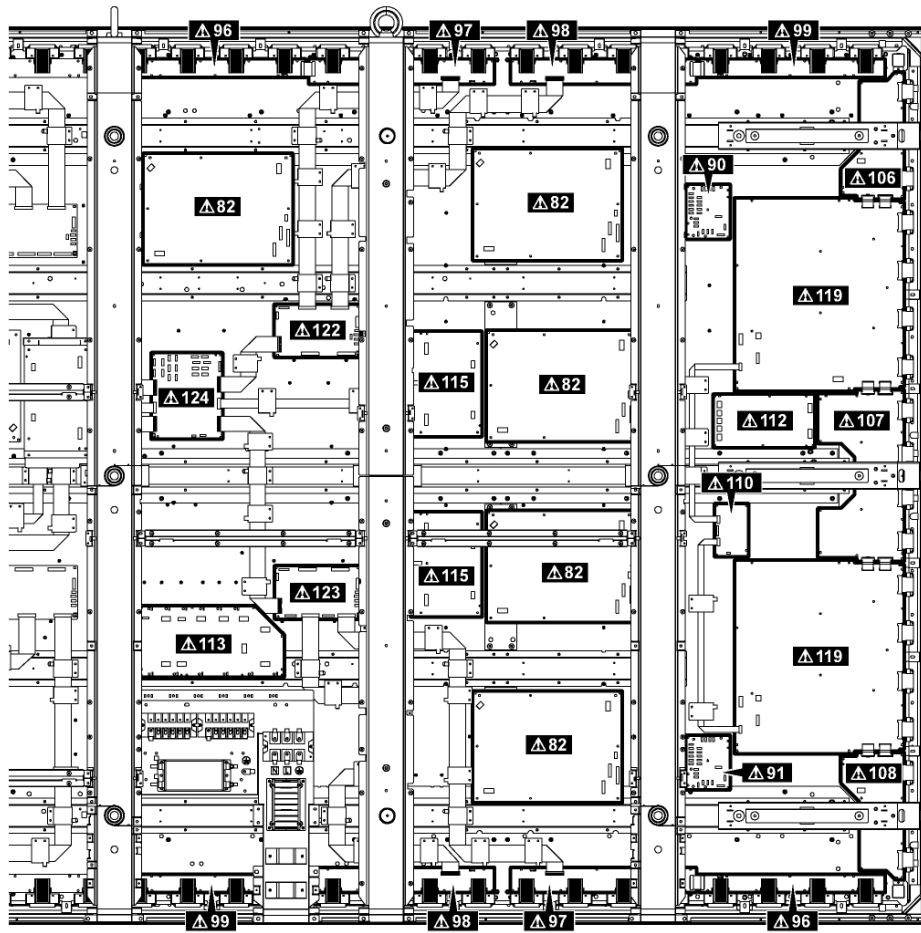
Model No. : TH-152UX1/W/C Fan part location (2)



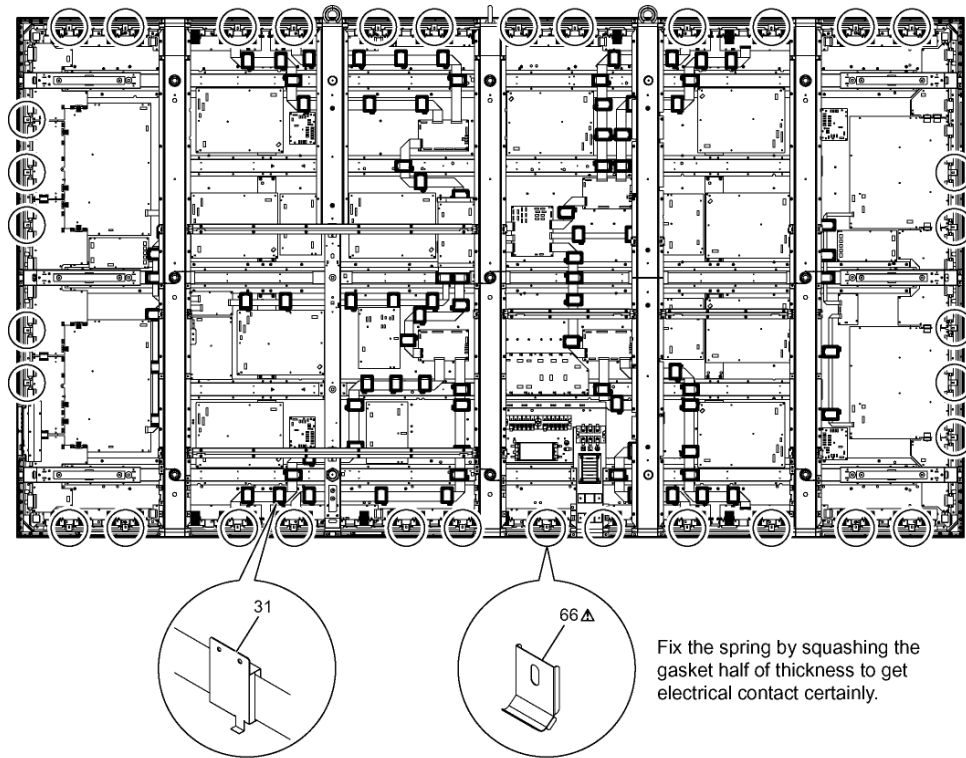
Model No. : TH-152UX1/W/C Rear cover location



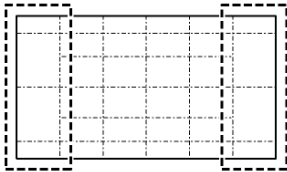
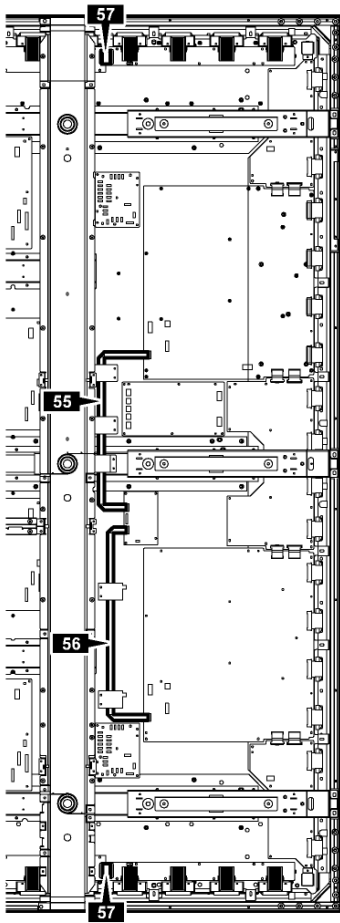
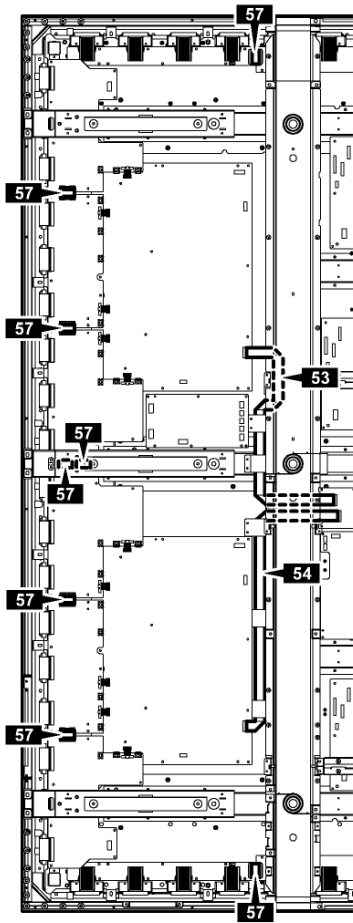




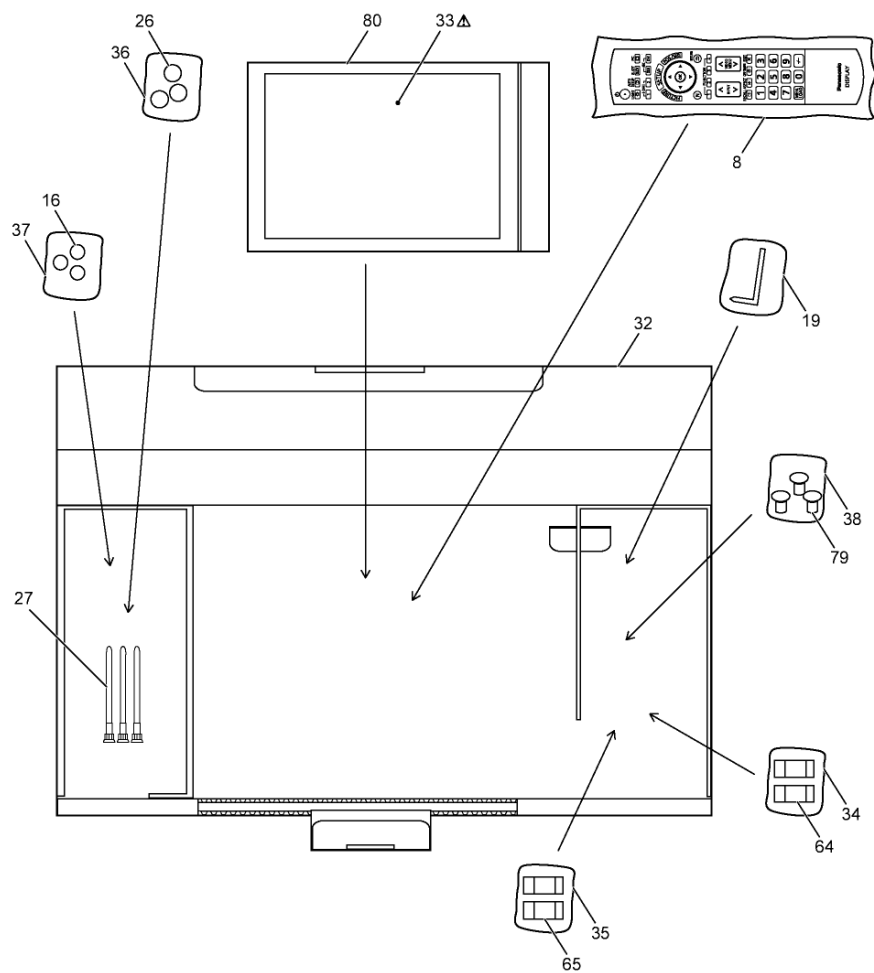
Model No. : TH-152UX1/W/C Cable Holder and EMC Spring part location



Model No. : TH-152UX1/W/C Cable relation (1)



Model No. : TH-152UX1/W/C Packing summary



Model No. : TH-152UX1/W/C Parts List

Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
	81	ETX2MM833MN	CIRCUIT BOARD P-M NO.P	1	(P)
	82	ETX2MM834MN	CIRCUIT BOARD P NO.P1-P9	9	(P1-P9)
	83	N5EZZ0000007	LVDS OUTPUT BOARD	2	
	84	N5FZZ0000010	4K INPUT BOARD	2	
	85	N5FZZ0000011	2K INPUT BOARD	1	
	86	N5ZZ00000201	POWER BOARD	1	
	87	N5ZZ00000202	EXTERIOR CHASSIS	1	METAL BOX FOR FRONT END BLOCK WITH CENTER CONNECTION BOARD (WITHOUT REF.83, 84, 85 AND 86)
	88	TNPA5233AC	CIRCUIT BOARD PB NO.1	1	(PB1)
	89	TNPA5233AD	CIRCUIT BOARD PB NO.2	1	(PB2)
	90	TNPA5233AE	CIRCUIT BOARD PB NO.3	1	(PB3)
	91	TNPA5233AF	CIRCUIT BOARD PB NO.4	1	(PB4)
	92	TNPA5237	CIRCUIT BOARD V1	1	
	93	TNPA5238	CIRCUIT BOARD V2	1	
	94	TNPA5239	CIRCUIT BOARD V3	1	
	95	TNPA5240	CIRCUIT BOARD S1	1	
	96	TNPA5246	CIRCUIT BOARD C1	4	(CA, CE, CJ, CN)
	97	TNPA5247	CIRCUIT BOARD C2	4	(CB, CF, CK, CP)
	98	TNPA5248	CIRCUIT BOARD C3	4	(CC, CG, CL, CQ)
	99	TNPA5249	CIRCUIT BOARD C4	4	(CD, CH, CM, CR)
	100	TNPA5250	CIRCUIT BOARD SU1	1	
	101	TNPA5251	CIRCUIT BOARD SU2	1	
	102	TNPA5252	CIRCUIT BOARD SU3	1	
	103	TNPA5253	CIRCUIT BOARD SD1	1	
	104	TNPA5254	CIRCUIT BOARD SD2	1	
	105	TNPA5255	CIRCUIT BOARD SD3	1	
	106	TNPA5258	CIRCUIT BOARD SS2	1	
	107	TNPA5259	CIRCUIT BOARD SS3	1	
	108	TNPA5261	CIRCUIT BOARD SS4	1	
	109	TNPA5262	CIRCUIT BOARD DSC	1	
	110	TNPA5263	CIRCUIT BOARD DSS	1	
	111	TNPA5266	CIRCUIT BOARD PSC	1	
	112	TNPA5267	CIRCUIT BOARD PSS	2	(PSS_L, PSS_R)
	113	TNPA5271	CIRCUIT BOARD F1	1	
	114	TNPA5272	CIRCUIT BOARD F2	1	
	115	TNPA5273	CIRCUIT BOARD F NO.B.C.D.E	4	(FB-FE)
	116	TNPA5273AB	CIRCUIT BOARD F NO.A	1	(FA)
	117	TXNHDE10UNT	CIRCUIT BOARD HDE	1	
	118	TXNSC11KEJ	CIRCUIT BOARD SC	2	(SCU, SCD)
	119	TXNSS11KEJ	CIRCUIT BOARD SS	2	(SSU, SSD)
	120	TZTNP011KEJ	CIRCUIT BOARD D NO.D1	1	(D1)
	121	TZTNP021KEJ	CIRCUIT BOARD D NO.D2	1	(D2)
	122	TZTNP031KEJ	CIRCUIT BOARD D NO.D3	1	(D3)

Model No. : TH-152UX1/W/C Parts List

Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
	123	TZTNP041KEJ	CIRCUIT BOARD D NO.D4	1	(D4)
	124	TZTNP051KEJ	CIRCUIT BOARD DU	1	
	125	TZTNP051LEJ	CIRCUIT BOARD DS	1	
	126	TZTNP061KEJ	CIRCUIT BOARD A	1	
	127	TZTNP071KEJ	CIRCUIT BOARD DN	1	
	128	TZTNP081KEJ	CIRCUIT BOARD HX	1	
	1	J0HBYY000023	NOISE FILTER	1	
	2	J0KE00000157	NOISE FILTER (CORE)	4	
	3	K4AA03H00116	TERMINAL BLOCK (3P)	1	
	4	K4AA06H00062	TERMINAL BLOCK (60A 6P)	2	
	5	L6FAYYYH0030	FAN UNIT (80)	9	
	6	L6FAYYYH0031	FAN UNIT (120)	33	
	7	L6FAYYYH0133	FAN UNIT (92)	6	
	8	N2QAYB000560	REMOTE CONTROLER	1	UX1/UX1W
	8	N2QAYB000561	REMOTE CONTROLER	1	UX1C
	9	TBXA46703A	5 RANGE BUTTON	1	
	10	TBXA50001	POWER BUTTON	1	
	11	TESD031	POWER BUTTON SPRING	1	
	12	TJEA093	6P SHORT TERMINAL	2	
	13	TKKC5213-1	LED PANEL	1	
	14	TKKC5276	REMOTE SENSOR PANEL	1	
	16	TKKL5370	M16 NUT COVER	9	
	17	TKKL5522	NOISE FILTER CASE TOP	1	
	18	TKKL5523	NOISE FILTER CASE BOTTOM	1	
	19	TKKX0015	HEXAGONAL WRENCH	1	
	20	TKUX21301	POWER SUPPLY TERMINAL COVER	1	
	21	TKUX21401	SOFT WRITING HOLE COVER	1	
	22	TKUX21801	SOFT WRITING HOLE COVER (4K)	1	
	23	TMKG405	FAN SPONGE (120)	94	
	24	TMKG469-1	FAN SPONGE	12	
	25	TMKG685	FAN SPONGE	6	
		TMM16473-1	CLAMPER (ALCH:36)	36	
		TMM17434-2	CLAMPER	1	
		TMM6428-1	CLAMPER (SLOT SHIELD CASE)	1	
		TMM6428-1	CLAMPER (F1:12)	12	
		TMM6428-1	CLAMPER (POWER CORD BRACKET)	8	
		TMM6496-1	CLAMPER (FAN MTL ASSY)	4	
		TMM7468-1	CLAMPER (FAN MTL ASSY:4 FANP3:7)	11	
		TMM7468-1	CLAMPER	1	
		TMM7473-1	CLAMPER	1	
	26	TMMA053	M20 NUT COVER	5	
		TMME047	CLAMPER (FANP3:3)	3	
		TMME061	CLAMPER	1	

Model No. : TH-152UX1/W/C Parts List

Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		TMME075	CLAMPER(SLOT SHIELD CASE)	3	
		TMME088	CLAMPER(SLOT CASE:5 ALCH:1)	6	
		TMME088	CLAMPER	49	
		TMME088	CLAMPER(FE METAL:1)	1	
		TMME088	CLAMPER(ALCH:55 PCB:3)	58	
		TMME182	CLAMPER(ALCH)	5	
		TMME185	NYLON RIVET	6	
		TMME190	CLAMPER(FAN:20 SLOTCASE:3)	23	
		TMME190	CLAMPER	35	
		TMME190	CLAMPER(METAL MID:2 A PCB:1)	3	
		TMME190	CLAMPER(RF_METAL:4 FE_METAL:6)	10	
		TMME190	CLAMPER(ALCH)	26	
	27	TMME203	CLAMPER	3	
		TMME217	CLAMPER(FE METAL)	1	
		TMME228	BAND HOLDER	6	
		TMME237	CLAMPER	18	
		TMME237	CLAMPER(PSSWIREBARRIER:2 ALCH24 AIDPIPE:3)	29	
		TMME291	EDGE SADDLE (FAN:18)	33	
		TMME291	EDGE SADDLE	13	
		TMME291	EDGE SADDLE (FANSC FIX:16)	16	
		TMME292	CLAMPER(SLOTCASE:2)	2	
		TMME292	CLAMPER(METAL TOP)	1	
		TMME293	CLAMPER	3	
		TMME332	CLAMPER(FAN ATTACHMENT D)	1	
		TMME332	CLAMPER	12	
		TMME332	CLAMPER(PCB:2)	2	
		TMME356	CLAMPER(METAL TOP)	1	
		TMME401	EDGE SADDLE	1	
	28	TMMJ068	RUBBER (FAN)	160	
	29	TMMX157	POWER BUTTON EDGE GUARD	1	
	30	TMWC016-1	POWER BUTTON BRACKET	1	
	31	TMXX034	CABLE HOLDER	91	
	32	TPDF0737	ACCESSORIES BOX	1	
	33	TQBC2618	INSTRUCTION BOOK(ENGLISH)	1	UX1
	33	TQBC2619	INSTRUCTION BOOK(FRENCH)	1	UX1
	33	TQBC2620	INSTRUCTION BOOK(SPANISH)	1	UX1
	33	TQBC2621	INSTRUCTION BOOK(GERMAN)	1	UX1
	33	TQBC2622	INSTRUCTION BOOK(DUTCH)	1	UX1
	33	TQBC2623	INSTRUCTION BOOK(ITALIAN)	1	UX1
	33	TQBC2624	INSTRUCTION BOOK(SWEDISH)	1	UX1
	33	TQBC2625	INSTRUCTION BOOK(DANISH)	1	UX1
	33	TQBC2626	INSTRUCTION BOOK(ARABIC)	1	UX1
	33	TQBC9010	INSTRUCTION BOOK(CD-ROM)	1	UX1

Model No. : TH-152UX1/W/C Parts List

Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
	33	TQBC2628	INSTRUCTION BOOK (ENGLISH)	1	UX1W
	33	TQBC2629	INSTRUCTION BOOK (ARABIC)	1	UX1W
	33	TQBC2630	INSTRUCTION BOOK (DANISH)	1	UX1W
	33	TQBC2631	INSTRUCTION BOOK (DUTCH)	1	UX1W
	33	TQBC2632	INSTRUCTION BOOK (FRENCH)	1	UX1W
	33	TQBC2633	INSTRUCTION BOOK (GERMAN)	1	UX1W
	33	TQBC2634	INSTRUCTION BOOK (ITALIAN)	1	UX1W
	33	TQBC2635	INSTRUCTION BOOK (JAPANESE)	1	UX1W
	33	TQBC2636	INSTRUCTION BOOK (KAZAKHSTAN)	1	UX1W
	33	TQBC2637	INSTRUCTION BOOK (RUSSIAN)	1	UX1W
	33	TQBC2638	INSTRUCTION BOOK (SPANISH)	1	UX1W
	33	TQBC2639	INSTRUCTION BOOK (SWEDISH)	1	UX1W
	33	TQBC2640	INSTRUCTION BOOK (UKRAINIAN)	1	UX1W
	33	TQBC9011	INSTRUCTION BOOK (CD-ROM)	1	UX1W
	33	TQBC2627	INSTRUCTION BOOK (CHINESE)	1	UX1C
	34	TQEF029	POLY BAG (SCREW)	1	
	35	TQEF035	POLY BAG (POWER CORD FIXING METAL B)	1	
	36	TQEF035	POLY BAG (M20 NUT COVER)	1	
	37	TQEF035	POLY BAG (M16 NUT COVER)	1	
	38	TQEF035	POLY BAG (POWER CORD FIXING METAL A)	1	
	39	TSXM155	CABLE (C21-D32)	1	(C21CB-2D32)
	40	TSXM156	CABLE (C31-D31)	1	(C31CC-2D31)
	41	TSXM157	CABLE (C21-D32)	1	(C21CF-3D32)
	42	TSXM158	CABLE (C31-D31)	1	(C31CG-3D31)
	43	TSXM159	CABLE (C31-D33)	1	(C31CQ-1D33)
	44	TSXM160	CABLE (C21-D34)	1	(C21CP-1D34)
	45	TSXM161	CABLE (C31-D33)	1	(C31CL-4D33)
	46	TSXM162	CABLE (C21-D34)	1	(C21CK-4D34)
	47	TSXM163	CABLE (DU42-D24)	1	(DU42-2D24)
	48	TSXM164	CABLE (DU41-D24)	1	(DU41-3D24)
	49	TSXM165	CABLE (DU44-D24)	1	(DU44-1D24)
	50	TSXM166	CABLE (DU43-D24)	1	(DU43-4D24)
	51	TSXM167	CABLE (DU21-DSC3)	1	
	52	TSXM168	CABLE (DU20-D20)	1	(DU20-3D20)
	53	TSXM169	CABLE (DSC1-SCU20)	1	(DSC1-SC20U)
	54	TSXM170	CABLE (DSC2-SCD20)	1	(DSC2-SC20D)
	55	TSXM171	CABLE (DSS3-SSU21)	1	(DSS3-SS21U)
	56	TSXM172	CABLE (DSS4-SSD21)	1	(DSS4-SS21D)
	57	TSXM173	CABLE (C-C, SU-SD)	14	
	58	TSXM199	CABLE (DN10-A10)	1	
	59	TSXM199	CABLE (DS1-A1)	1	
	60	TSXM200	CABLE (DN16-A16)	1	
	61	TTUA2543	REAR COVER R COMPLETE	1	UX1

Model No. : TH-152UX1/W/C Parts List

Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
	61	TTUA2544	REAR COVER R COMPLETE	1	UX1W
	61	TTUA2545	REAR COVER R COMPLETE	1	UX1C
	62	TUWF271	POWER CORD BRACKET	1	
	63	TUXK076	HOOK	9	
	64	TUXX655	POWER CORD FIXING METAL (SPARE A)	2	
	65	TUXX656	POWER CORD FIXING METAL (SPARE B)	2	
	66	TXFES011KEJ	EMC SPRING ASSY	34	
	67	TXFKU011KEJ	REAR COVER L ASSY	1	
	68	TXFKU031KEJ	REAR COVER T.L. OUTSIDE ASSY	1	
	69	TXFKU041KEJ	REAR COVER T.L. INSIDE ASSY	1	
	70	TXFKU051KEJ	REAR COVER T.R. OUTSIDE ASSY	1	
	71	TXFKU061KEJ	REAR COVER T.R. INSIDE ASSY	1	
	72	TXFKU071KEJ	REAR COVER B.L. OUTSIDE ASSY	1	
	73	TXFKU081KEJ	REAR COVER B.L. INSIDE ASSY	1	
	74	TXFKU091KEJ	REAR COVER B.RIGHT ASSY	1	
	75	TXFKU101KEJ	SUB REAR COVER ASSY	1	UX1/UX1W
	75	TXFKU021KEC	SUB REAR COVER ASSY	1	UX1C
	76	TXFUW021KEJ	POWER SW COVER ASSY	1	
		TXJ0UTA1KEJ	LVDS CABLE(OUTA-3D4/3D5)	1	
		TXJ0UTB1KEJ	LVDS CABLE(OUTB-2D4/2D5)	1	
		TXJ0UTC1KEJ	LVDS CABLE(OUTC-4D4/4D5)	1	
		TXJ0UTD1KEJ	LVDS CABLE(OUTD-1D4/1D5)	1	
		TXJDN41KEJ	LVDS CABLE(DN4-IN1)	1	
		TXJDN51KEJ	LVDS CABLE(DN5-IN2)	1	
		XSB3+6FJ	SCREW	2	
		XTB4+12JFJ	SCREW(NF CASE)	4	
		XTV3+10JFJ	SCREW	1	
	77	XVN20+30FJ	EYE BOLT(M20)	3	
	78	XWB16BVJ	M16 SPRING WASHER	9	
		THEA068N	SCREW(PC:2 SERIAL:2)	4	
		THEA068N	SCREW	2	
	130	THEA215	HEXAGON SOCKET BUTTON HEAD SCREW	9	
		THEL0239	SCREW(HDE:4)	4	
		THEL027N	SCREW	4	
		THEL037N	SCREW(DD:128)	128	
		THEL065Z	SCREW (BACK COVER)	240	
		THEL065Z	SCREW (BC FIXING METAL)	51	
		THEL065Z	SCREW (SIDE POWER ASSY)	3	
		THEL065Z	SCREW (CORD)	4	
		THTD013N	STEP SCREW	160	
		THTF011N	SCREW	55	
		THTF011N	SCREW(PRINT:295 FCC:91 F_METAL:4 CLAMP:4 1)	431	
		THTF011N	SCREW (C:112)	112	

Model No. : TH-152UX1/W/C Parts List

Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		XYD5+E12FJ	SCREW	1	
		XYN3+F10FJ	SCREW(PWB-PBH:PSC-PBH)	4	
		XYN3+F8FJ	SCREW(A:3 DS:2 MID:3 TOP:5 HX:1)	14	
		XYN3+F8FJ	SCREW(DN:4 SLOT_BLOCK:4 SC/SS FAN:48)	56	
		XYN4+F10FJ	SCREW	24	
		XYN4+F10FJ	SCREW(NF:4 CASE:4 GASKET MTL:2)	10	
		XYN4+F10FJ	SCREW(TML_MT:8 SU/SD:22 PNL_MT:12 JNT_MT:15)	57	
		XYN4+F10FJ	SCREW(FAN SC FIX MTL:16 JOINT:34)	50	
		XYN4+F10FJ	SCREW(JOINT18 FANC8 FAN P4 SLOT SHIELD2)	32	
		XYN4+F16FJ	SCREW(GH-CAB:GH-JOINTMETAL)	106	
		XYN4+F25FJ	SCREW(TERMINAL)	6	
		XYN4+F32FJ	SCREW	160	
		XYN4+F8FJ	SCREW(F/E FIX MTL BOT)	4	
		XYN4+F8FJ	SCREW(V1:1 V3:1 METAL:4)	6	
		XYN4+F8FJ	SCREW(EMC SPRING ASSY:34 FE FIX:4)	38	
		XYN4+F8FJ	SCREW(FRONT_END)	8	
		XYN5+F15FJ	SCREW(CAB-JOINTMETAL)	12	
		XYN5+F15FJ	SCREW(ESC-MOUNT_BLOCK)	32	
		XYN5+F25FJK	SCREW(CAB-JOINTMETAL)	36	
		XYN6+F20FJ	SCREW(MOUNT_BLOCK)	58	
		XYN8+F20FJK	SCREW(PIPE)	18	
	79	XYN8+F35FJK	SCREW	3	
	80	XZBT6506	POLY BAG (INSTRUCTION BOOK)	1	
	RM1501	B3RAD0000168	REMOTE SENSOR	1	